



PowerCUTTER-System



Traditional fields of application



before



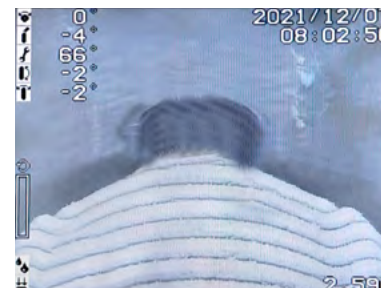
after



before



after



Equipped to perform all milling tasks

+ Application range from DN 150 (6") to DN 700 (28")



Power
CUTTER 150



Power
CUTTER 200



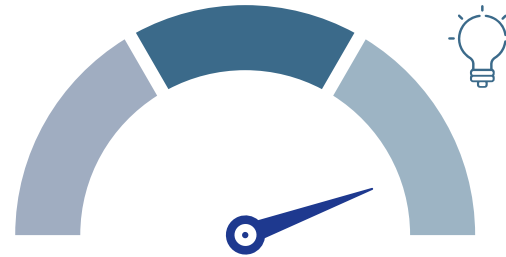
Power
CUTTER 200 E

Basic Functions



- + High crawler speed (ca. 18–36 m/min)
- + Swivel colour zoom camera with LED
- + Front and rear camera
- + Silencer for air motor
- + Quick set up for DN change
- + One system, two robots (DN150 to DN700)
- + Air and electric motor
- + Endless rotation of the robot arm

Innovations



- + Multifunctional robot
- + No supply hoses / wires outside the robot
- + Position sensors for arm, crawler and tools
- + Pressure, humidity and temperature monitoring
- + Automatic lateral location function (patented)
- + Compatible with WinCan for full inspection
- + Quickly changeable air motor
- + Free-configurable control panel



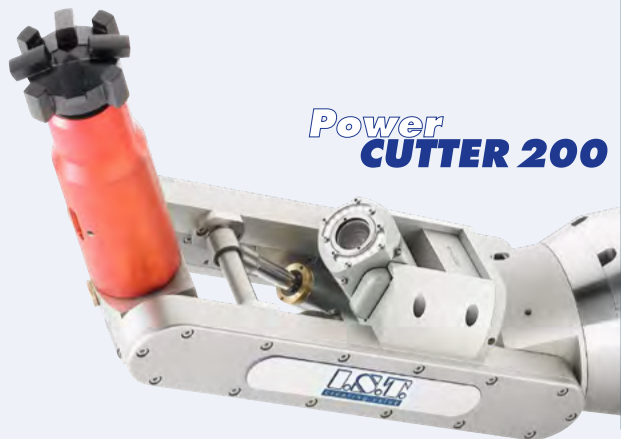
The dream of a multifunctional robot



Multifunctional robot

Milling

Milling also in egg-shaped profiles
DN400/600 – DN600/900



Repairs + Rehabilitation

Packer assortment and bladders
for lateral repair DN 150 - DN 800
disconnectable

Power
TOP HAT



Short liner
DN100 – DN600



Quick-Lock-System
QUICK LOCK



CCTV inspection + cleaning

TV inspection

WinCan



Highest pressure water jetting



Special tool
Chisel + Grabber



System components overview

PowerCUTTER 150



PowerCUTTER 200



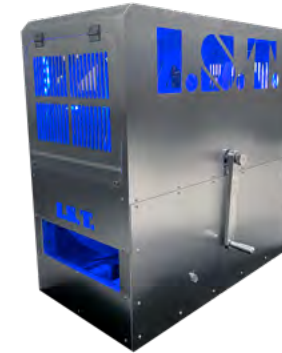
PowerCUTTER 200 E



Cable drum 140 m / 220m



Water / air drum



Command unit & control panel

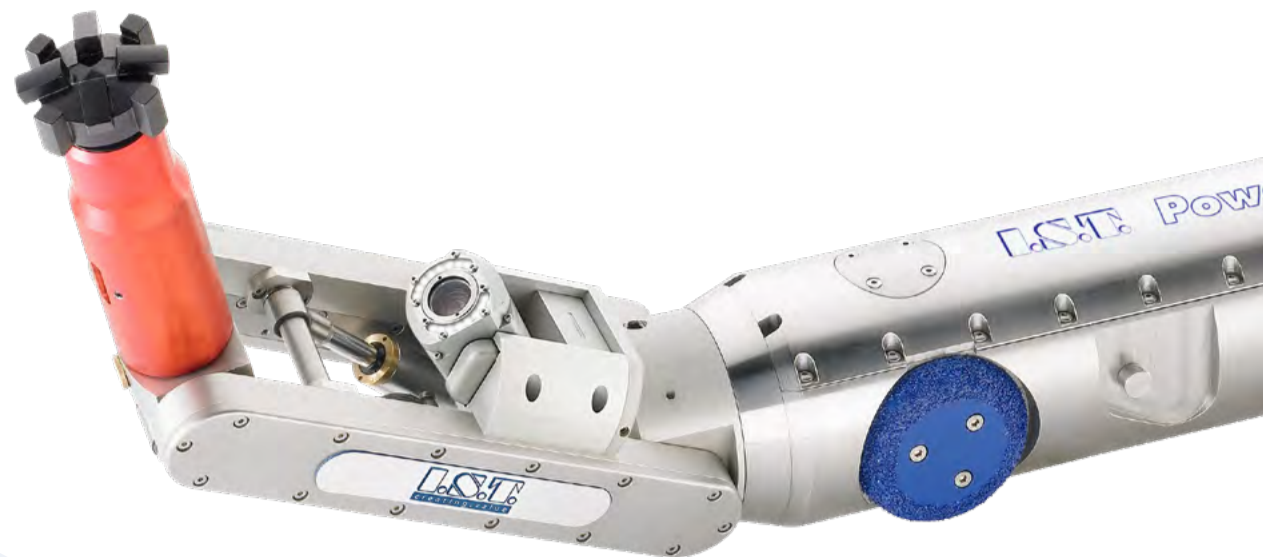


Hybrid drum cable / water 140 m



PowerCUTTER 200 - Pneumatic drive

	PC 200
Operating range:	DN 200 – 700
Weight:	65 – 100 kg
Length:	950 mm
Dimension circle:	140 mm
Degrees of freedom:	4
Cameras:	2
Cutting motor drive type:	Air
Number of motors:	3
Sensor technology:	Yes
Measurement software:	Yes
Air/water supply hose:	100 m / 200 m
Cable lengths:	140 m / 220 m
Power supply:	240 V 60 / 50 Hz 16 A
Air supply:	min. 8 bar / 3 m ³
Speed of crawler:	approx. 18 m/min with Ø 100 mm wheels approx. 36 m/min with Ø 190 mm wheels



Power
CUTTER 200

Airmotors PowerCUTTER 200

Power-Line

- + Power: 1,4 kW / 1,9 hp
- + Rpm: 4.300 1/min
- + Torque: 12,2 Nm / 28,85 lbs ft
- + Air consumption:
1,650 l/min / 58 cfm



Basic-Line (basic equipment)

- + Power: 1,2 kW / 1,63 hp
- + Rpm: 10.800 1/min
- + Torque: 5,5 Nm / 3,7 lbs ft
- + Air consumption:
1,500 l/min / 52 cfm



Eco-Line

- + Power: 0,86 kW / 1,2 hp
- + Rpm: 18.000 1/min
- + Torque: 4 Nm / 2,95 lbs ft
- + Air consumption:
1,050 l/min / 35 cfm



Power
CUTTER 200

PowerCUTTER 150 - Pneumatic drive

	PC 150
Operating range:	DN 150 – 300
Weight:	20 – 25 kg
Length:	750 mm
Dimension circle:	105 mm
Degrees of freedom:	3
Cameras:	1 Twin
Cutting motor drive type:	Air
Number of motors:	1
Sensor technology:	Yes
Measurement software:	No
Air/water supply hose:	100 m / 200 m
Cable lengths:	140 m / 220 m
Power supply:	240 V 60 / 50 Hz 16 A
Air supply:	min. 8 bar / 3 m ³
Speed of crawler:	approx. 24 m/min with Ø 50 mm wheels



Power
CUTTER 150

Airmotor PowerCUTTER 150

- + Power: 0,86 kW / 1,2 hp
- + Speed: 18.000 1/min
- + Torque: 4 Nm / 2,95 lbs ft
- + Air requirement: 1,050 l/min / 35 cfm
- + Equipped with an universal M14 thread



Power
CUTTER 150

PowerCUTTER 200 E - Electrical drive







	PC 200 E
Operating range:	DN 200 – 700
Weight:	68 – 103 kg
Length:	990 mm
Dimension circle:	140 mm
Degrees of freedom:	4
Cameras:	2
Cutting motor drive type:	Electric
Number of motors:	1
Sensor technology:	Yes
Measurement software:	Yes
Air/water supply hose:	Water: 200 m
Cable lengths:	220 m
Power supply:	240 V 60 / 50 Hz 16 A
Air supply:	-
Speed of crawler:	approx. 18 m/min with Ø 100 mm wheels approx. 36 m/min with Ø 190 mm wheels



Power
CUTTER 200 E

Electric motor PowerCUTTER 200 E

Advantages of the electric motor:

-  × Less noise
-  Batteries make you flexible
-  × No daily maintenance
-  × No lubrication needed
-  × No compressor needed
-  Van mounting from 3.5 t and up



- + Field sensors for monitoring the motor
- + passively air-cooled via cooling fins
- + radial shaft sealing ring
- + hardened shaft
- + Equipped with an universal M14 thread

Power
CUTTER 200 E

Front camera PC 200 & PC 200 E

Basic camera

- + High resolution CCD-color camera
- + High power LED-light
- + Wide swivel range
- + Manually electrical focusing
- + Pressure monitored
- + Easy mounting and dismounting



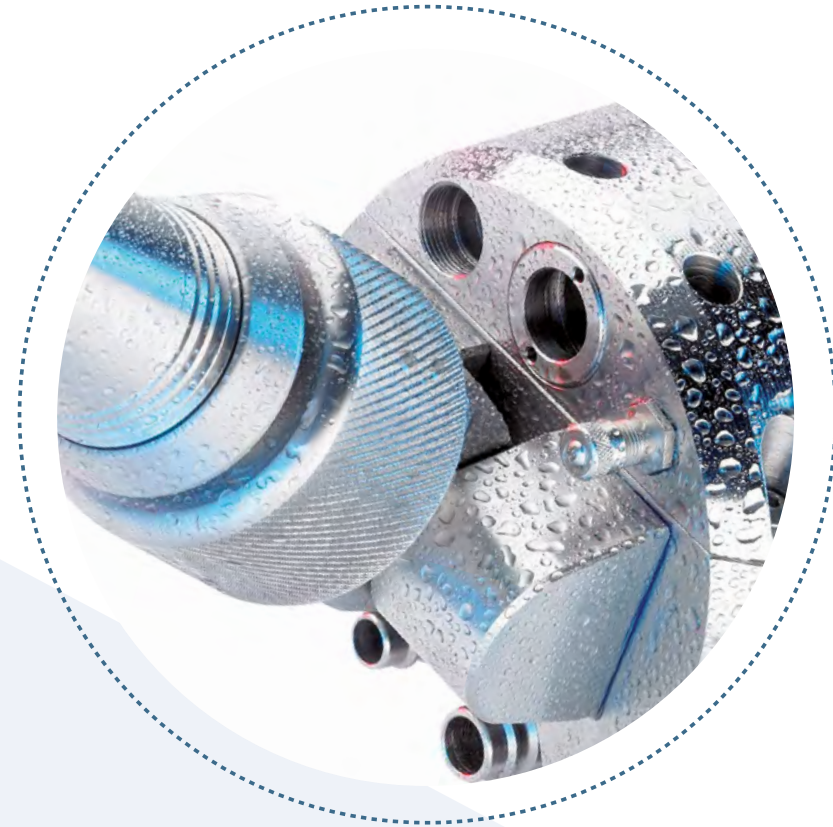
Zoom camera

- + High resolution CCD-color camera
- + High power LED-light
- + 10 x optical zoom
- + Wide swivel range
- + Autofocus / manual focus
- + Automatic shutter/ manual shutter
- + Pressure monitored



Rear camera PC 200 & PC 200 E

- + Camera to monitoring the reverse driving
- + High resolution CCD-color camera
- + High power LED-light
- + Camara via Joystick button selectable
- + Pressure monitored



Command unit & control panel

- + Mobile control in flight case or for fixed installation
- + Universal supply voltage 115 V/ 230V
- + Communication via CAN-Bus
- + Control of all movements by joysticks
- + Visualization of all parameters on the screen
- + Switchable video inputs and outputs
- + Storage and retrieve of the parameters (optional)



Free configurable control panel



Controllable via
PS4 controller

Sensoric features

Security sensor

- + Pressure sensor in the crawler
- + Temperature sensor in the crawler
- + Humidity sensor in the crawler

Position sensor

- + Sensory monitoring of the arm position
- + Tool position forwards and backwards
- + Position of the robot arm circling
- + Longitudinal and transvers inclination of the crawler

CAN-Bus-Communication

- + Can-Bus allows a modular structure



Cable drums PC 150 / 200

- + 140 m / 220 m special cable; elastic limit over 400 kg
- + Automatic winding and unwinding
- + Guidance of the cable winding and unwinding
- + Integrated distance display
- + Manual reeling of the cable possible



Hose reels PC 150 / 200

+ 100 m / 200 m TWIN hose for air and water supply

Manual reel

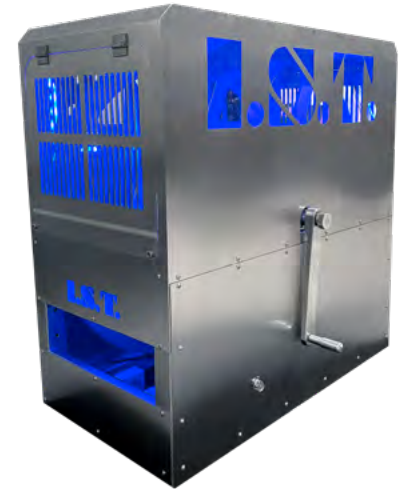
- + Stable steel construction
- + Manual winding and unwinding of the Special hose
- + Built-in air lubricator with solenoid valve

Motoric reel

- + Reeling by means of an airmotor
- + Integrated air lubricator for the drive engine
- + Solid steel frame
- + Protection all around against violation
- + Weight approx. 165 kg incl. 200 m TWIN hose



Manual reel



Motoric reel

Hybrid drum PC 200 E

- + 140 m special cable with integrated water hose for camera cleaning; tensile force > 400 kg
- + Automatic winding and unwinding of the cable
- + Forced guidance of the cable during winding and unwinding
- + Integrated meter display
- + Adjustable cable tension
- + Adjustable cable speed
- + Manual reeling of the cable possible
- + Weight approx. 130 kg



Milling PowerTOOLS

- + High-performance tools
- + Large selection for all applications
- + Stoneware, concrete, lime deposits, liners (GRP and felt), plastic, cast iron or steel



Power
TOOLS

Individual truck installation

We configure your individual vehicle conversion entirely according to your requirements with our technology and high-quality supply units.

- + Vehicle or trailer of your choice
- + Consideration of customer-specific requirements and wishes
- + High-quality and field-tested equipment
- + Individual design with your corporate design



Universal frame / Video workstation

Advantages of the system

- + Swivelling crane system with extension arm and chain hoist
- + Independent power supply using a battery pack – working time up to 2 days
- + Built-in water supply for rising the camera
- + Air treatment by means of tool lubricant
- + Bracket and control for the pneumatically driven air drum
- + Bracket for the able druml XXL with 200 m cable
- + Storage option for Power Cutter, accessories and tools
- + LED spotlight to illuminate the shaft
- + Fork casings for easily transport with a forklift
- + Control unit with preparation for 19" control and monitor holder
- + Both units can be easily installed in a 3.5-to transporter



Universal frame / Video workstation



Van installation 3,5 – 5 T

+ Low-Budget installation



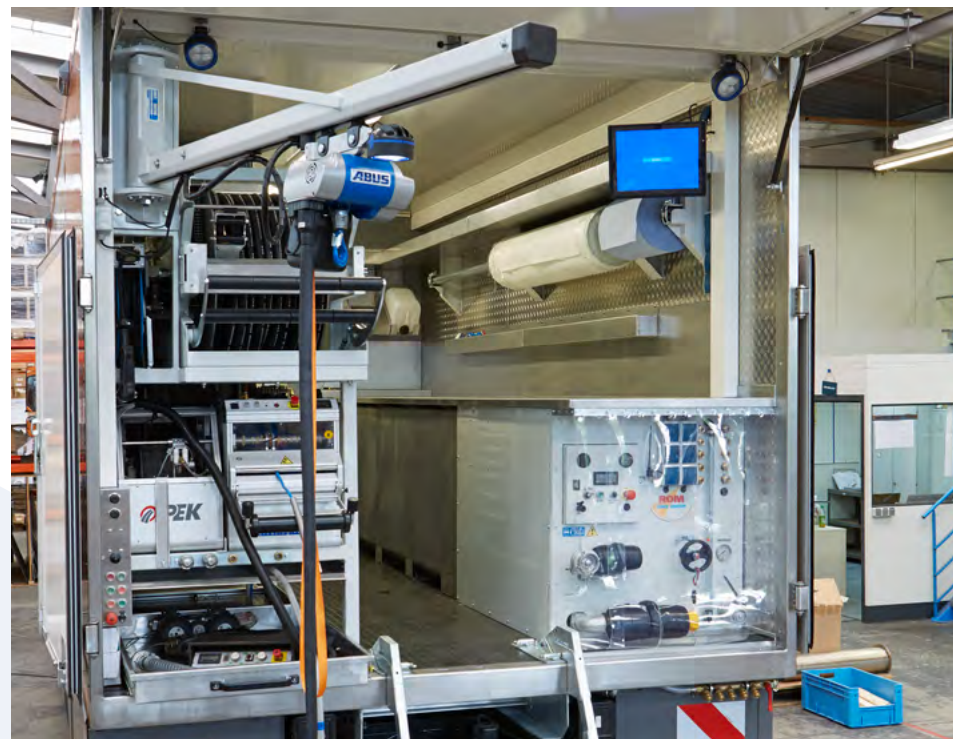
Van installation 3,5 – 5 T

+ High-End installation



Van installation 7,5 T and upwards

+ High-End installation



Power **INSPECTION**

Problem

+ The recovery of lateral connections after the installation of hose liner

Usual practise:

- + Measuring with a sense of proportion and handwritten record
- + The distance of the side inlets shall be calculated by a measuring tape or a marking on the cable
- + Rich source of errors and unreliable

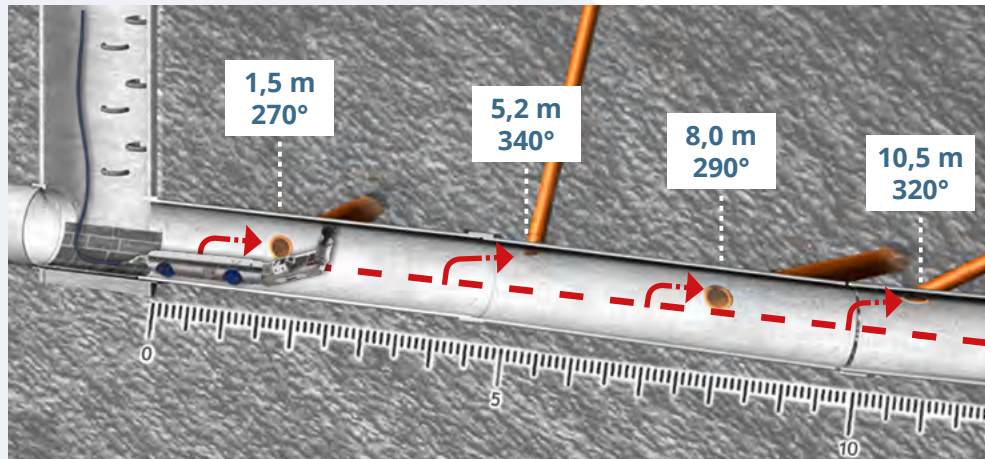
Inadequacies/Sources of errors:

- + Measurement because of incorrect reading of the position on the clock
- + Transfer errors of the read off values for the logging process



Solution: Power INSPECTION

- + Software patented by I.S.T. for automatic locating of service connection
- + Sensors in the robot allow automatic approach & positioning
- + Side inlets are recorded and saved prior to rehabilitation
- + Relocaly after rehabilitation based on the stored data
- + At the end of a project, comprehensive documentation is provided in digital form

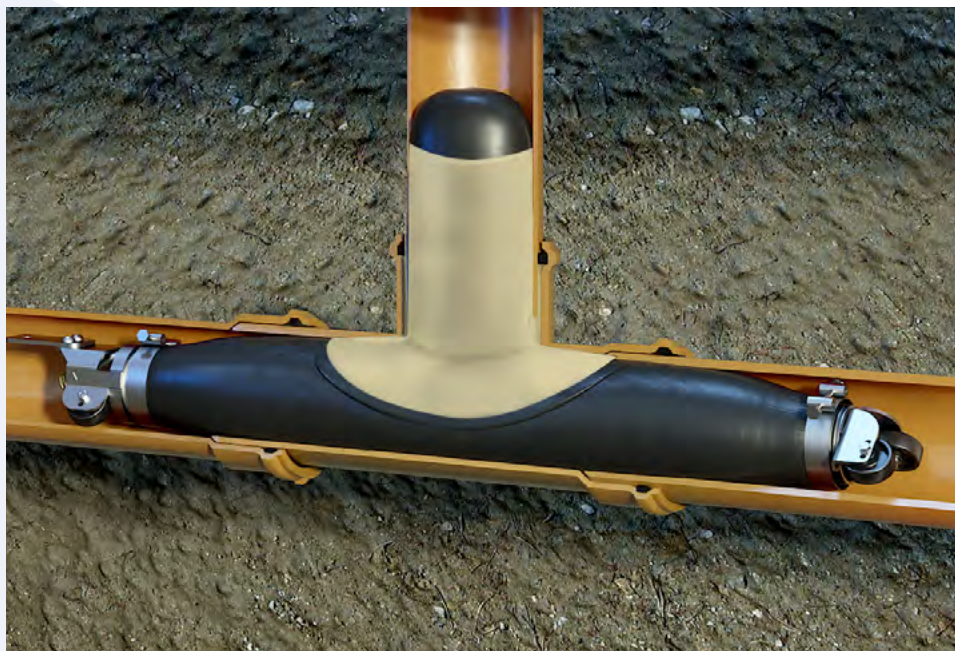


Power
TOP HAT

Easy
TOP HAT

TOP HAT-System

+ Socket renovation with our TOP HAT-System



Quelle: Aqualine Dortmund

TOP HAT-Material

- + Reactive resins Silicate resin Easy PUR/Easy PUR Plus or epoxy resin Easy POX 1504
- + Hats available in different dimensions and angulations
- + Polyester needle felt with/without coating - also in combination with ECR glass fabric mats



Easy
TOP HAT

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Then follow us on our social media channels
- + Simply click on the button and network directly



Thanks for your attention

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