



ROGER WAHL

Managing Director - TRACTO-TECHNIK UK Ltd

AGENDA

1. INTRODUCTION| TRACTO, PRODUCTS, APPLICATIONS
2. WHEN TO CONSIDER PIPE BURSTING
3. PRODUCT AND PROCESS OVERVIEW

TRACTO

› Who is TRACTO?



TRACTO

➤ Who is TRACTO?

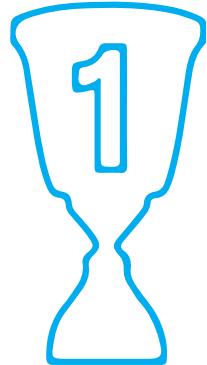


GRUNDOMAT



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TRACTO WORLDWIDE



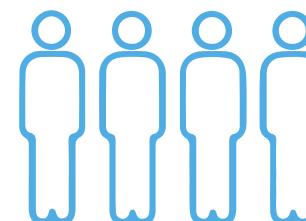
2023

Innovation leader
Germany

In the category
'Earth and rock dilling'
awarded by the
F.A.Z.-Institute

TRACTO is the
**world's
only**
full-range supplier
of trenchless technology

60 Years
of pioneering spirit
with **350** patents



Worldwide, TRACTO has
750
employees

The group has a turnover of
250 mio.
Euros worldwide

10 locations in Germany
5 sister companies worldwide
92 Partner dealers around the world

For more than
50 years
we stand for
trenchless technology



PIPE BURSTING

WHAT DO I WANT TO ACHIEVE?



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➤ What do I want to achieve?

- Improved volumetric flow rate?
- Reduced leakage/seepage?
- Increased capacity?
- Re-establishing static parameters?
- Re-alignment?

➤ Any 'YES', bursting should be considered



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➤ TRACTO BURSTING SOLUTIONS FOR

INSTALLING PIPES WITH SAME DIAMETER

INSTALLING PIPES WITH LARGER DIAMETER

INSTALLING PIPES WITH SMALLER DIAMETER



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UPSIZING with Pipe Bursting

TRACTO Global Product
Specialist should be involved

TRACTO UK product specialist
should be involved

TRACTO standard
solution available

> 2 dimensions
= experimental

1-2 dimensions =
knowledge required

equal dimension
= Standard



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➤ Simple Model Check-List

1. Host pipe dimensions (ND, OD, ID) profile (round, oval)? Host Pipe Material?
2. Proposed pipe dimensions of new pipe? New Pipe Material?
3. Position and course? Bends, branches, lateral connections, walkway/road?
4. Depth of existing pipe?
5. Adjacent infrastructure?
6. Surrounding ground conditions? Bedding of existing pipe?
7. Soil conditions? Water table?
8. Location (site access, pipe layout arrangements)? Pit arrangements? Manholes?
9. Reason for replacement? Cracks, Corrosion, Deformation, Breakage?
10. Previous repairs/rehabilitation?
11. Inspection possible? CCTV?
12. Permits?



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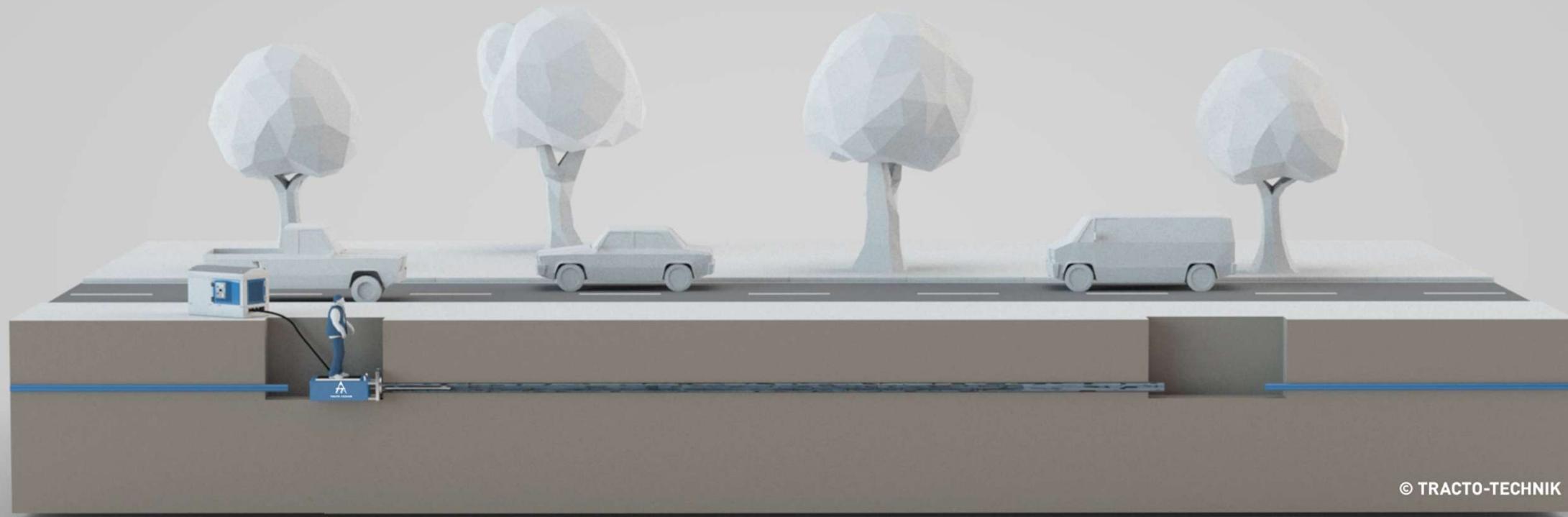
TWO TECHNOLOGIES

STATIC v. DYNAMIC PIPE BURSTING



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STATIC PIPE BURSTING

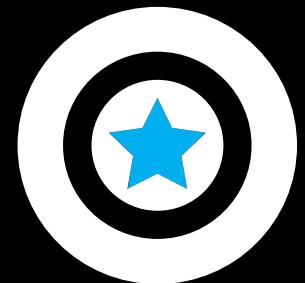


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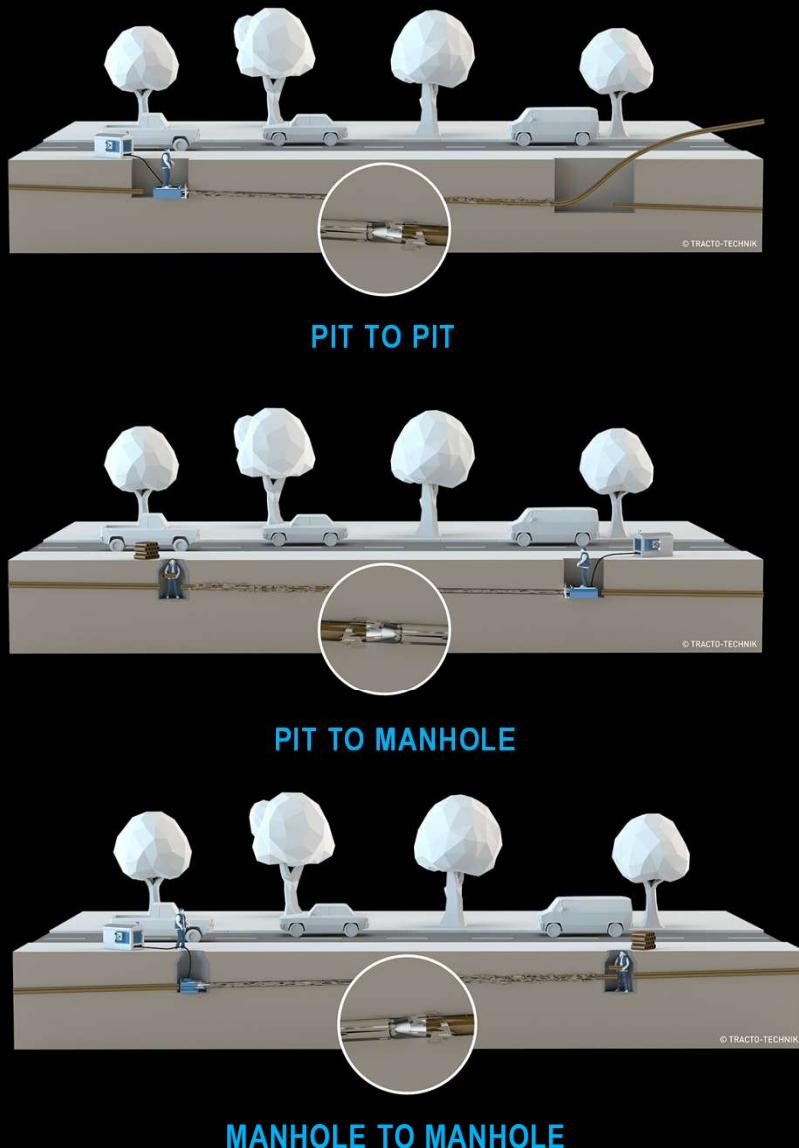


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TRACTO RANGE OF STATIC PIPE BURSTERS



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STATIC PIPE BURSTING

INSTALLING A PIPE WITH SAME OR LARGER DIAMETER

- TYPICAL INSTALLATION LENGTH: 100-150 METER
- PIPE DIAMETER: ND 50 – ND 1200
- RENEWAL OF CIRCULAR & OVAL PROFILES
- SOLUTION FOR HEAVY DAMAGED PIPES WITH SIGNIFICANT DEFORMATIONS AND EVEN TOTAL COLLAPSE
- UPSIZING OF EXISTING DIAMETER IS POSSIBLE WHEN THE SOIL IS DISPLACABLE

STATIC PIPE BURSTERS: GRUNDOBURST



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PIPE MATERIALS STATIC BURSTING

OLD PIPE MATERIALS

- Stoneware
- Concrete
- Reinforced concrete
- Grey cast iron
- Ductile iron
- Asbestos cement
- Pitch Fibre cement
- PE
- PP
- PVC
- Glass fibre reinforced plastics (GRP)
- Steel
- Liner
- PA12

NEW PIPE MATERIALS

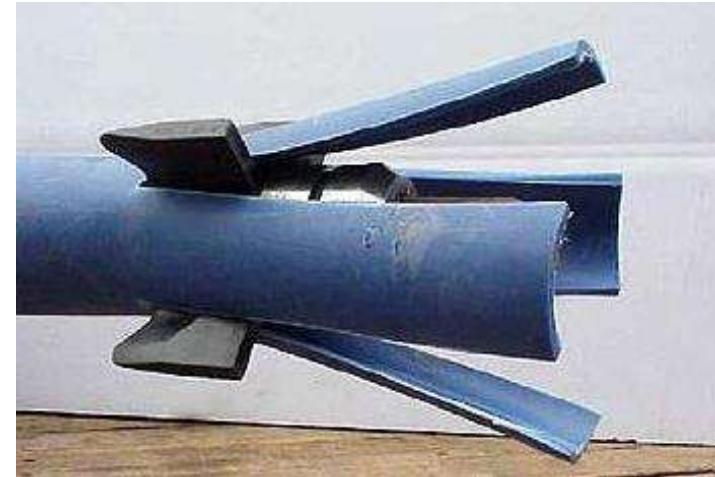
- ✓ PE (short section or coil)
- ✓ PP
- ✓ PVC
- ✓ Glass fibre reinforced plastics (GRP)
- ✓ Ductile iron
- ✓ Steel
- ✓ PA12
- ✓ Stoneware
- ✓ Concrete



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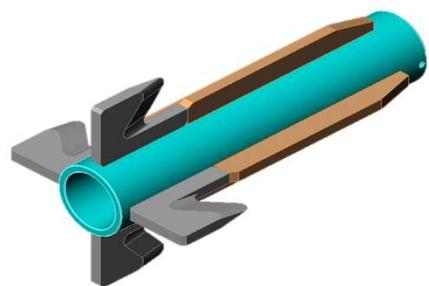
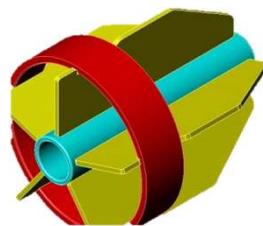
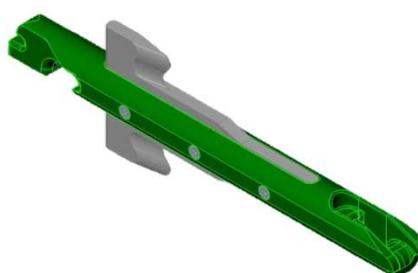
BURST HEADS – CUTTING KNIFES



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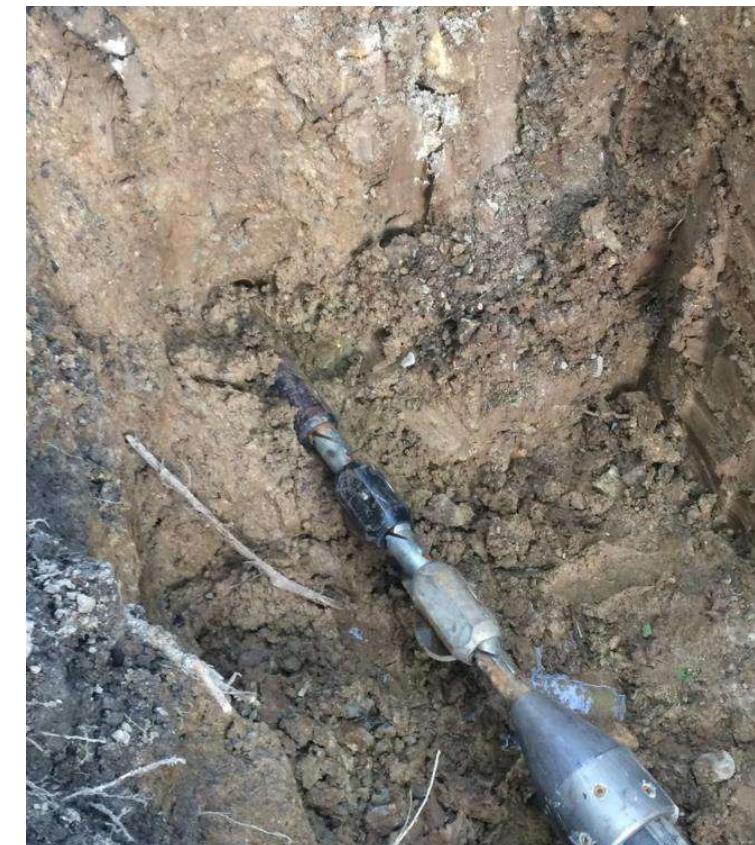
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WIDE RANGE OF INTERCHANGEABLE ACCESSORIES TO SUIT ALL PIPE MATERIALS



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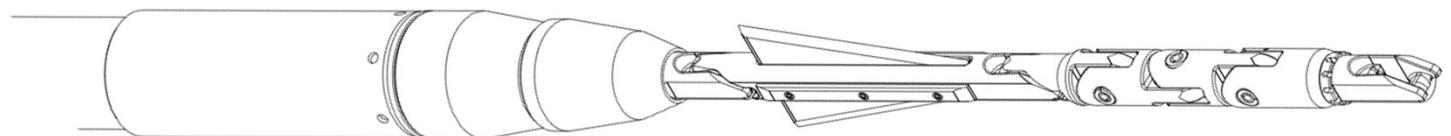
TYPICAL SETUP STATIC PIPE BURSTING



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EXAMPLE: BURSTING CAST IRON

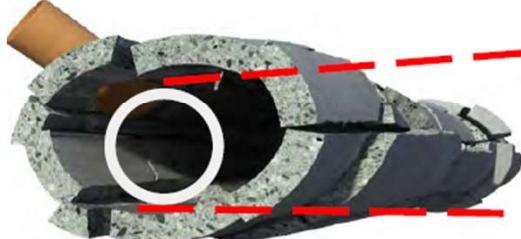


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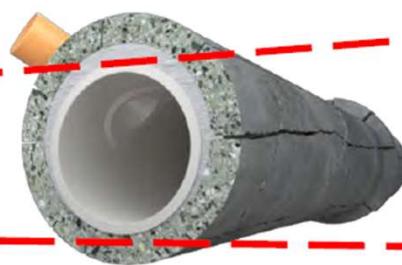
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STATIC PIPE BURSTERS: GRUNDOBURST

RELINING WITH ANNULUS



CALIBRATED PIPE BURSTING
WITH ANNULUS



TIP METHOD WITH
ANNULUS GAP



PIPE BURSTING



OLD PIPE DAMAGED

DAMAGES DEFORMATIONS 50%
AND EVEN TOTAL COLLAPSE

DAMAGES DEFORMATIONS 25%

HEAVY DAMAGES UP TO
TOTAL COLLAPSE



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RECONNECTING LATERALS

Pos: 2; Anschluss, andere Art des Anschlusses, offen, Höhe = 100,00mm, Breite = 100,00mm, Stutzen gebürstet



Pos: 1 - 2; Anschluss, andere Art des Anschlusses, offen, Höhe = 100,00mm, Breite = 100,00mm, Stutzen nach der Sanierung



PICTURE SOURCE: ROHRSANIERUNGSTECHNIK DOMMEL



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RECONNECTING LATERALS: DN150 – DN800



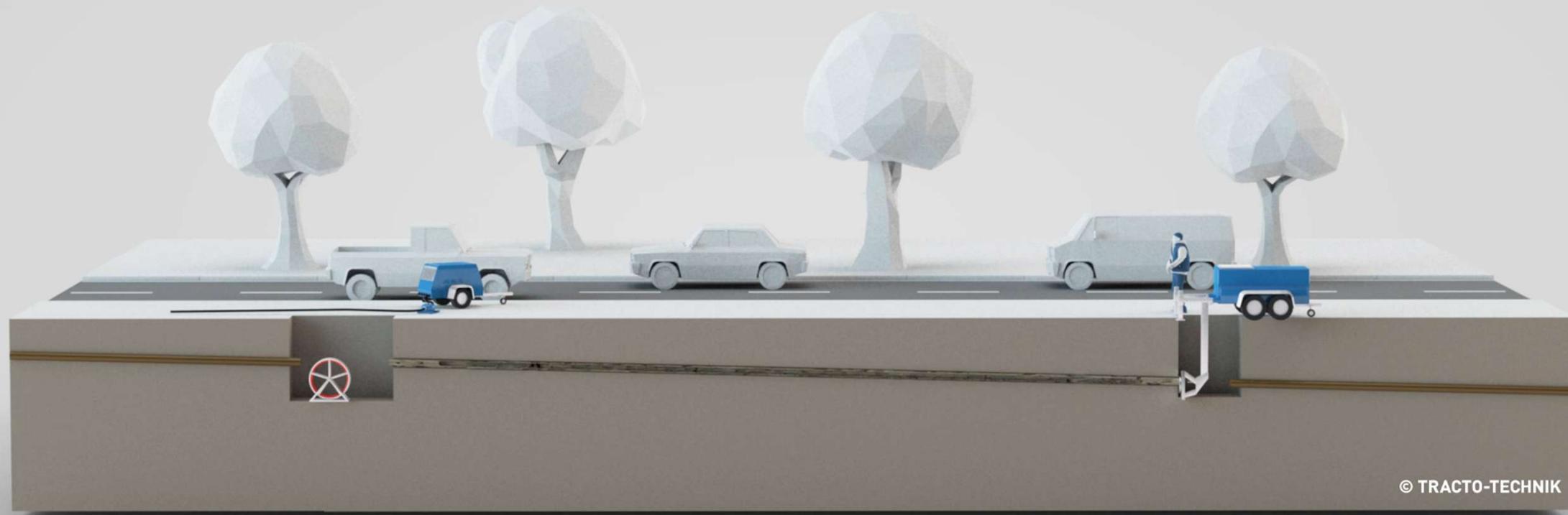
PICTURE SOURCE: IMS ROBOTICS



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DYNAMIC PIPE BURSTING

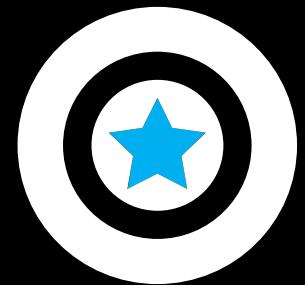


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TRACTO RANGE OF DYNAMIC PIPE BURSTERS



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DYNAMIC PIPE BURSTERS: GRUNDOCRACK



GRUNDOCRACK	PCG 130		PCG 180		PCG 200		PCG 260		PCG 350	
	METRIC	IMPERIAL								
Machine Ø (mm / in)	130	5.1	180	71.	208	8.2	280	11.0	380	15.0
Length (mm / in)	1.460	57.5	1.700	66.9	2.100	82.7	2.290	90.2	2.730	107.5
Weight (kg / lbs)	95	209.4	230	507.1	395	870.8	615	1,355.8	1.180	2,601.5
Upsizing Ø (mm / in)	280	11.0	392	15.4	450	17.7	560	22.0	630	24.8
New pipe OD (mm / in)	225	8.9	315	12.4	355	14.0	450	17.7	560	22.0
No. of strokes (min ⁻¹)	320	320	280	280	290	290	310	310	220	220
Air consumption (m ³ /min / cfm)	2,7	95	4,5	159	6,5	230	12	424	20	706
with blade head		X		X		-		-		-
with pulling eye		-		X		X		X		X



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PIPE MATERIALS DYNAMIC BURSTING

OLD PIPE MATERIALS

- Concrete
- Reinforced concrete
- Stoneware
- Grey cast iron
- PVC
- Asbestos cement
- Pitch Fibre cement

NEW PIPE MATERIALS

- ✓ PE (short and long/continuous)
- ✓ PP
- ✓ PVC
- ✓ Steel
- ✓ PA12



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DYNAMIC PIPE BURSTING

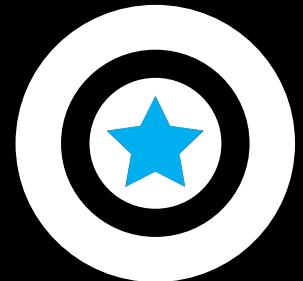


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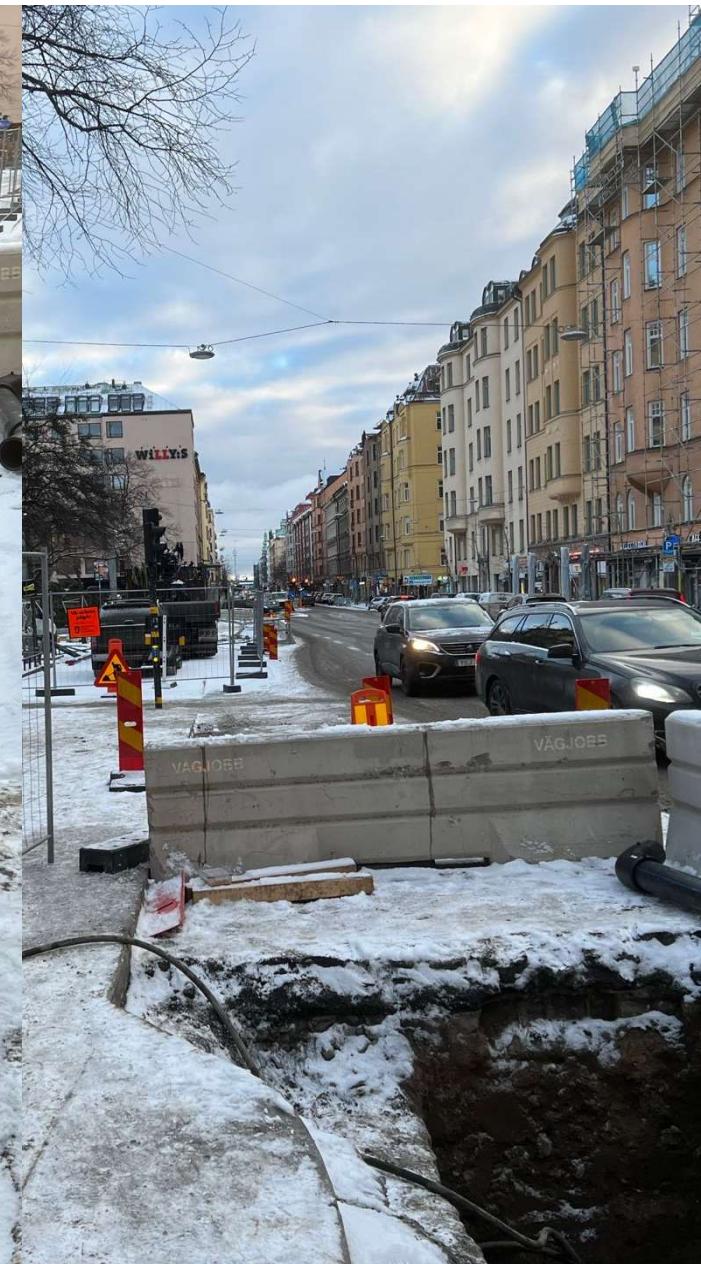
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PIPE BURSTING

IN ACTION AROUND THE WORLD



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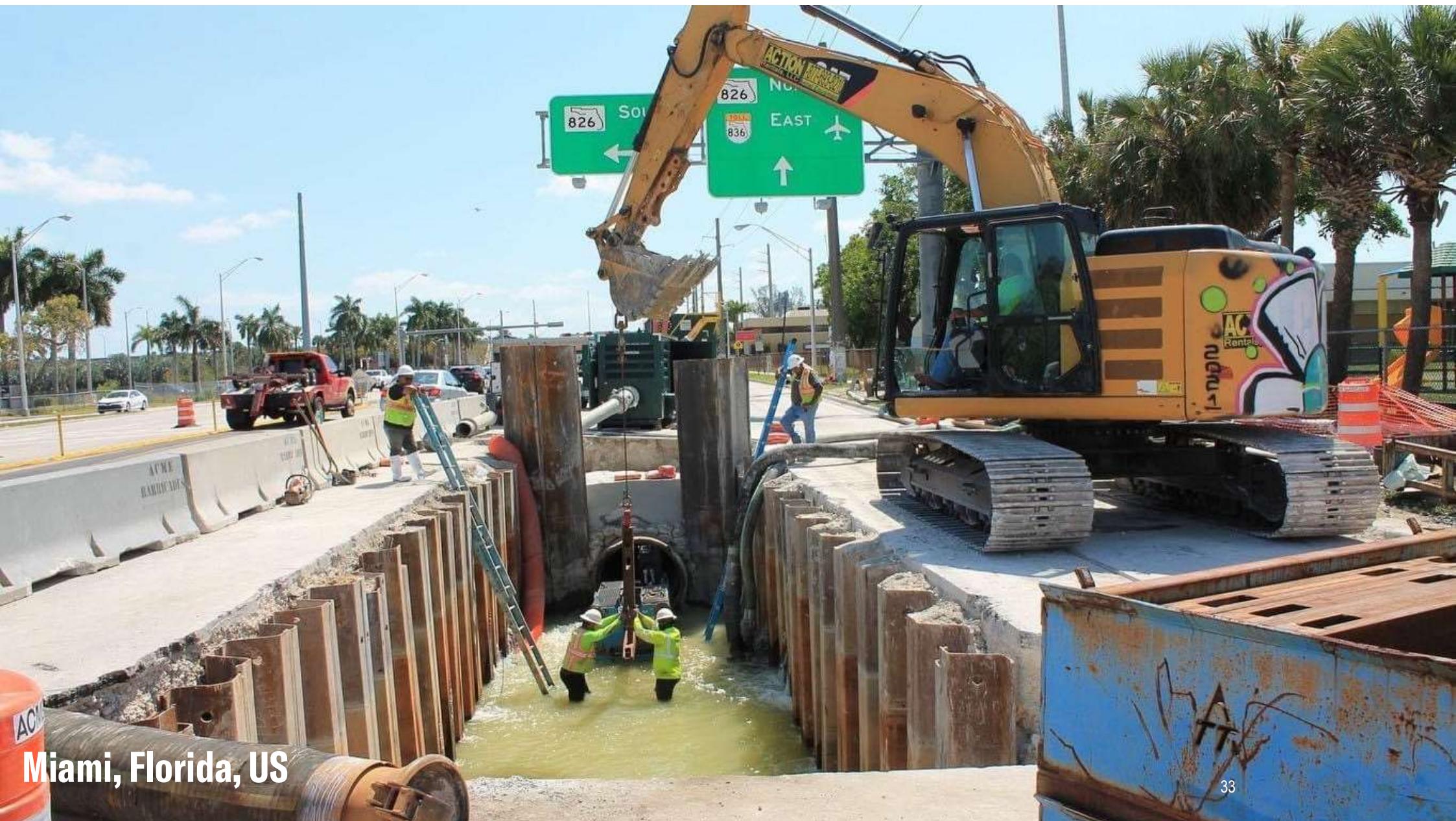


Stockholm, Sweden



Cardiff, UK





Miami, Florida, US





An aerial photograph of a modern urban environment. In the foreground, there are several modern buildings with glass and steel facades. A road with multiple lanes of traffic cuts through the scene. Green trees are planted along the sidewalks and between buildings. The overall image is a vibrant, high-angle view of a city.

SUMMARY: THE FUTURE OF INFRASTRUCTURE RENEWAL IS TRENCHLESS!



THANK YOU

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