



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?



➤ Who is TRACTO?

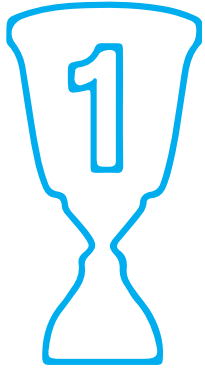


GRUNDMAT



TRACTO

TRACTO WORLDWIDE



2023

**Innovation leader
Germany**

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

60 Years

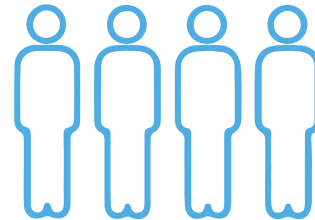
of pioneering spirit

with **350** patents

TRACTO is the

world's only

full-range supplier
of trenchless technology



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?



TRACTO

➤ 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



➤ **TRACTO BURSTING SOLUTIONS FOR**

INSTALLING PIPES WITH SAME DIAMETER

INSTALLING PIPES WITH LARGER DIAMETER

INSTALLING PIPES WITH SMALER DIAMETER



TRACTO UK | ROGER WAHL

TRACTO

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



TRACTO

➤ 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?



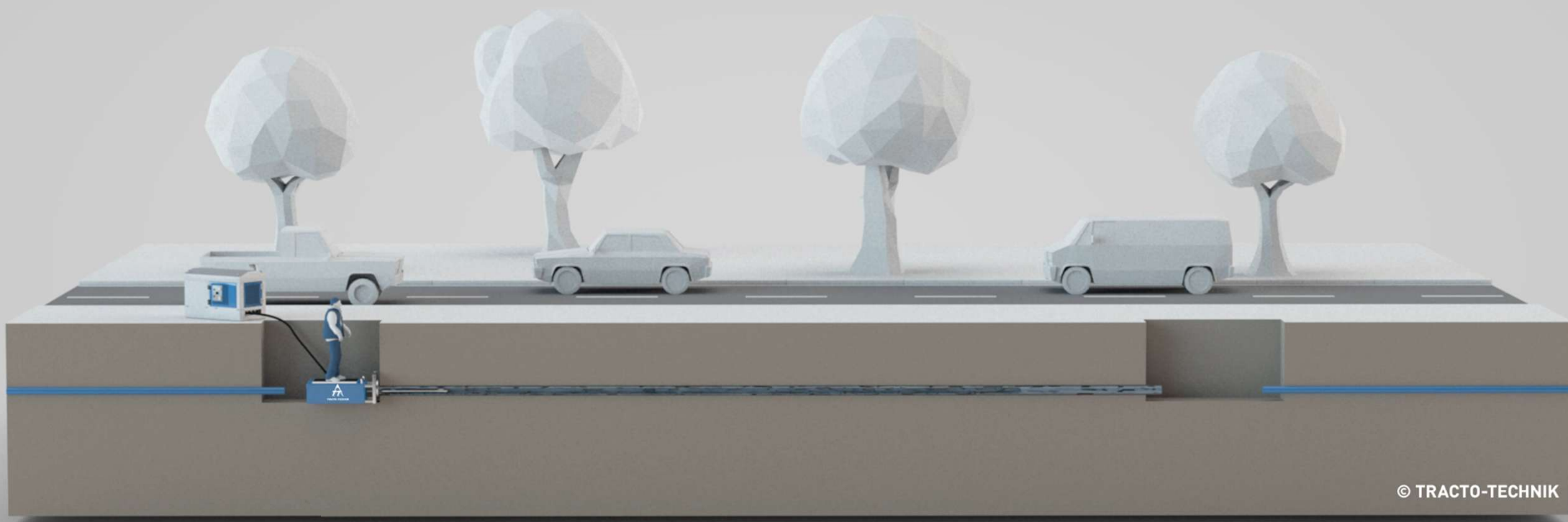
TWO TECHNOLOGIES

STATIC v. DYNAMIC PIPE BURSTING



TRACTO

STATIC PIPE BURSTING



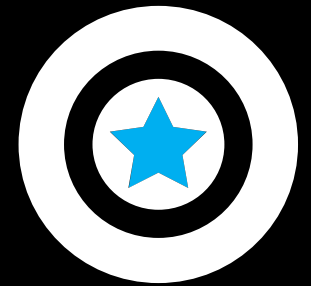
© TRACTO-TECHNIK



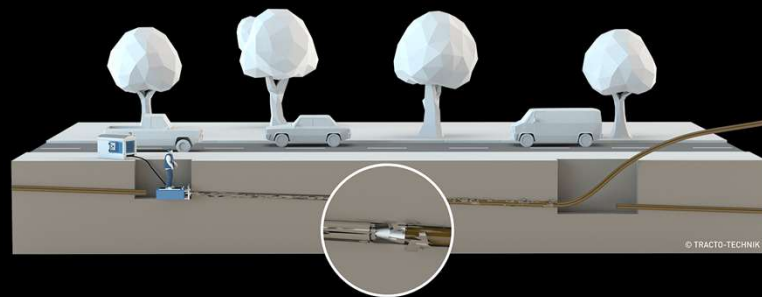
TRACTO

TRACTO RANGE

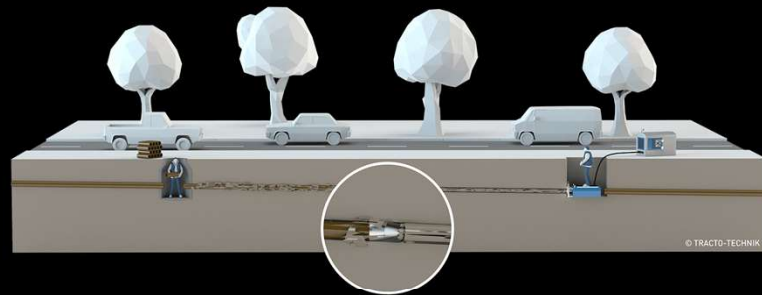
OF STATIC PIPE BURSTERS



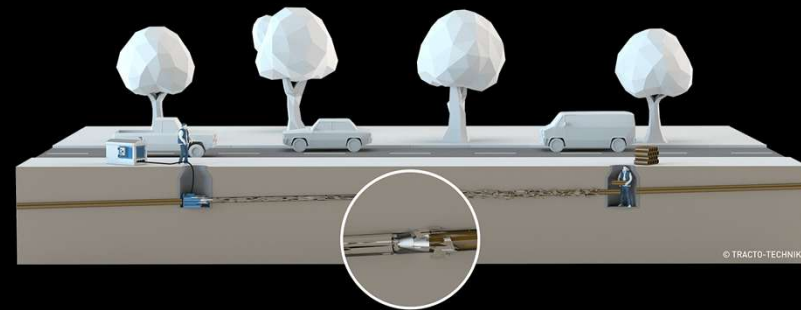
TRACTO



PIT TO PIT



PIT TO MANHOLE



MANHOLE TO MANHOLE

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



TRACTO UK | ROGER WAHL

TRACTO

PIPE MATERIALS STATIC BURSTING

OLD PIPE MATERIALS

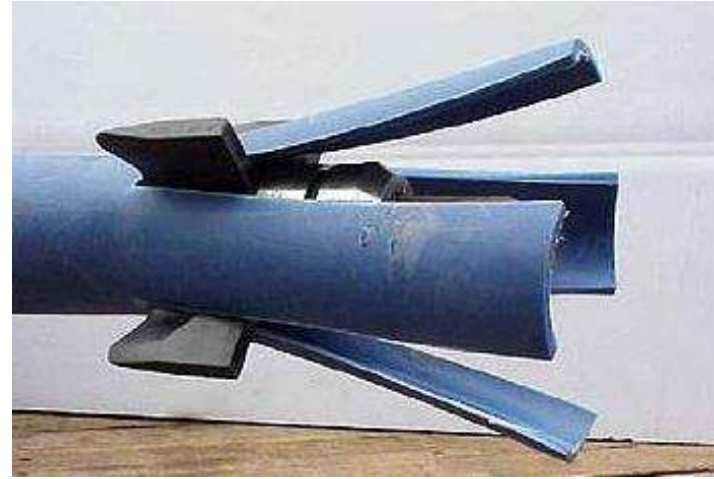
- Stoneware
- Concrete
- Reinforced concrete
- Grey cast iron
- Ductile iron
- Asbestos cement
- Pitch Fibre cement
- PE
- PP
- PVC
- Glass fibre reinforced plastics (GRP)
- Steel
- Liner
- PA12

NEW PIPE MATERIALS

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



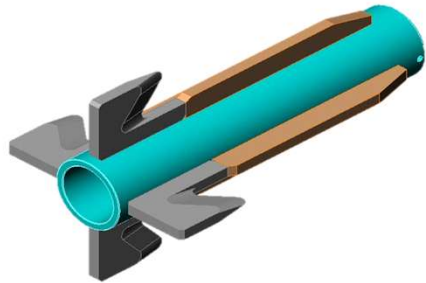
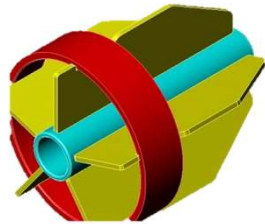
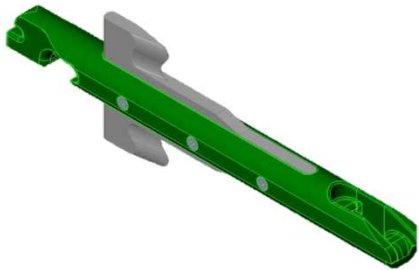
BURST HEADS – CUTTING KNIFES



TRACTO UK | ROGER WAHL

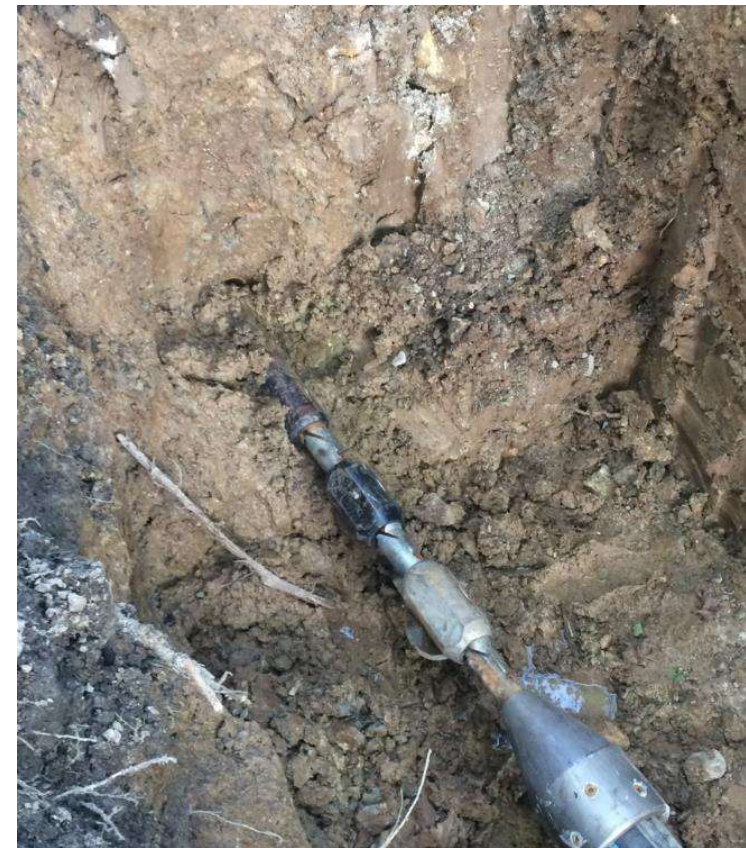
TRACTO

WIDE RANGE OF INTERCHANGEABLE ACCESSORIES TO SUIT ALL PIPE MATERIALS



TRACTO

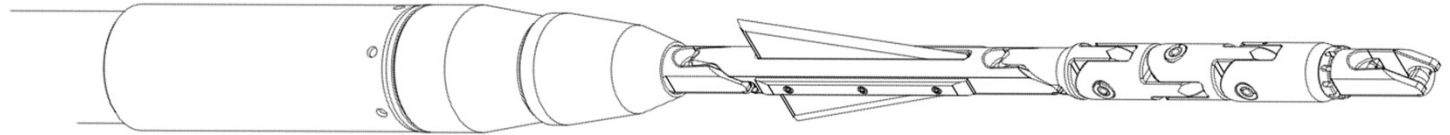
TYPICAL SETUP STATIC PIPE BURSTING



TRACTO UK | ROGER WAHL

TRACTO

EXAMPLE: BURSTING CAST IRON



TRACTO UK | ROGER WAHL

TRACTO

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

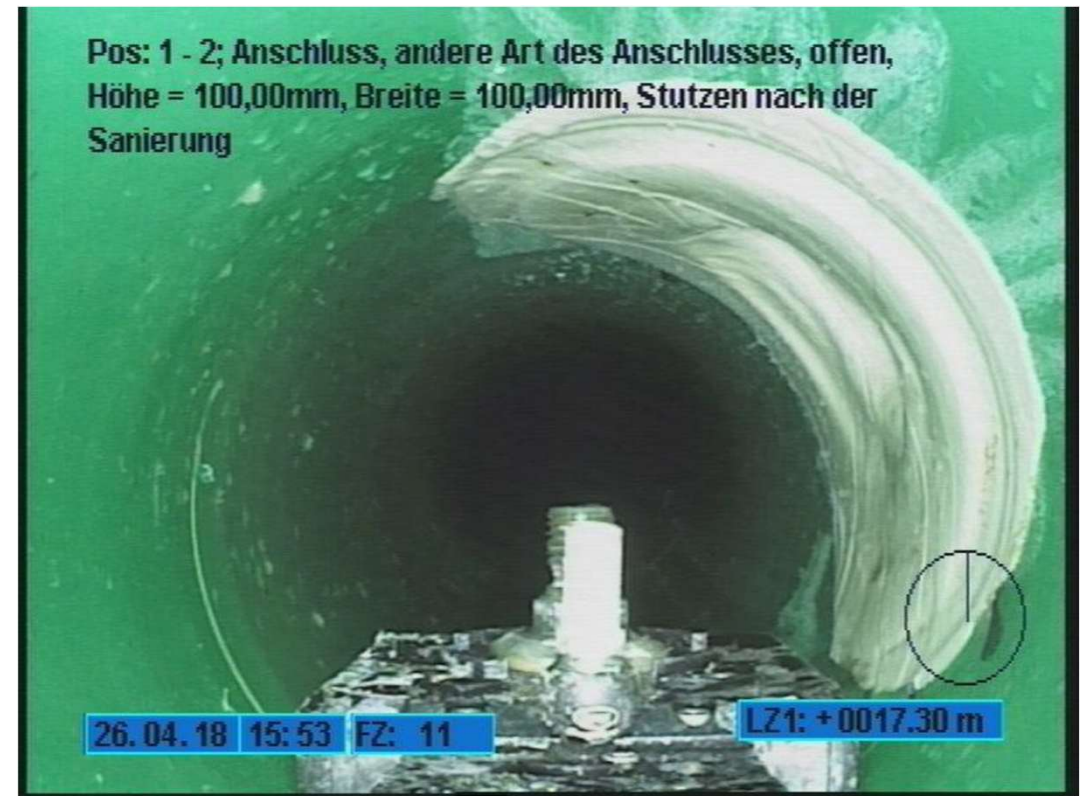
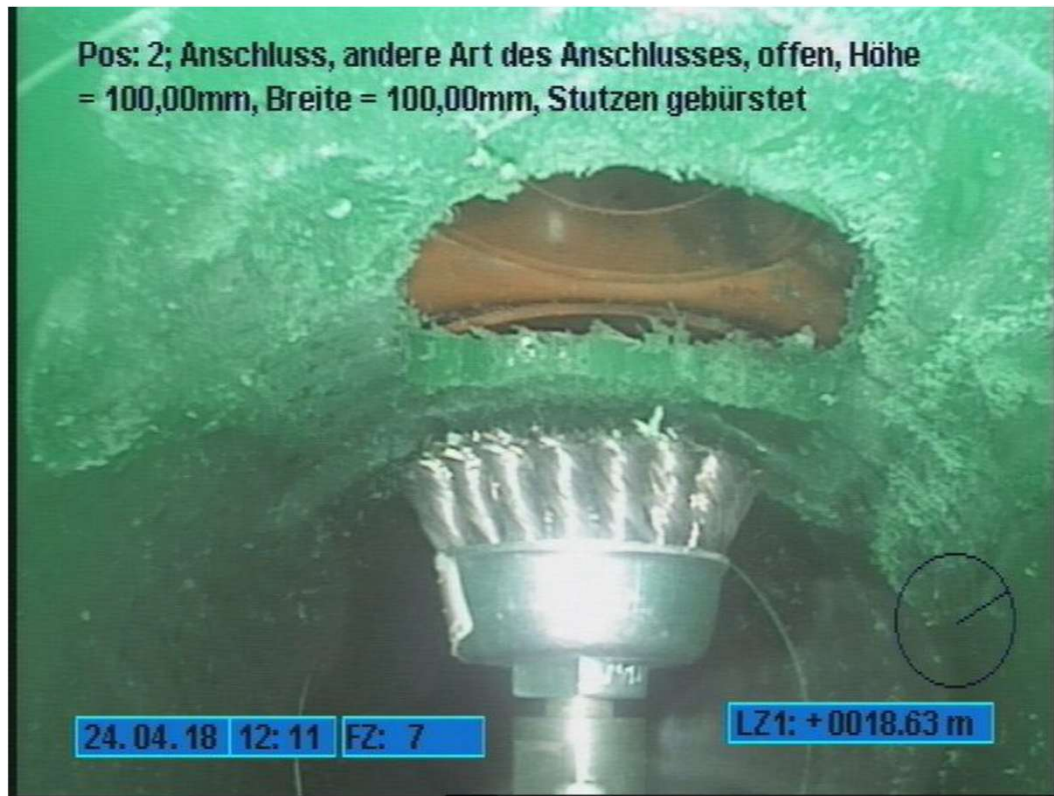
DAMAGES DEFORMATIONS 25%

HEAVY DAMAGES UP TO
TOTAL COLLAPSE



TRACTO UK | ROGER WAHL

RECONNECTING LATERALS



PICTURE SOURCE: ROHRSANIERUNGSTECHNIK DOMMEL



TRACTO UK | ROGER WAHL

TRACTO

RECONNECTING LATERALS: DN150 – DN800



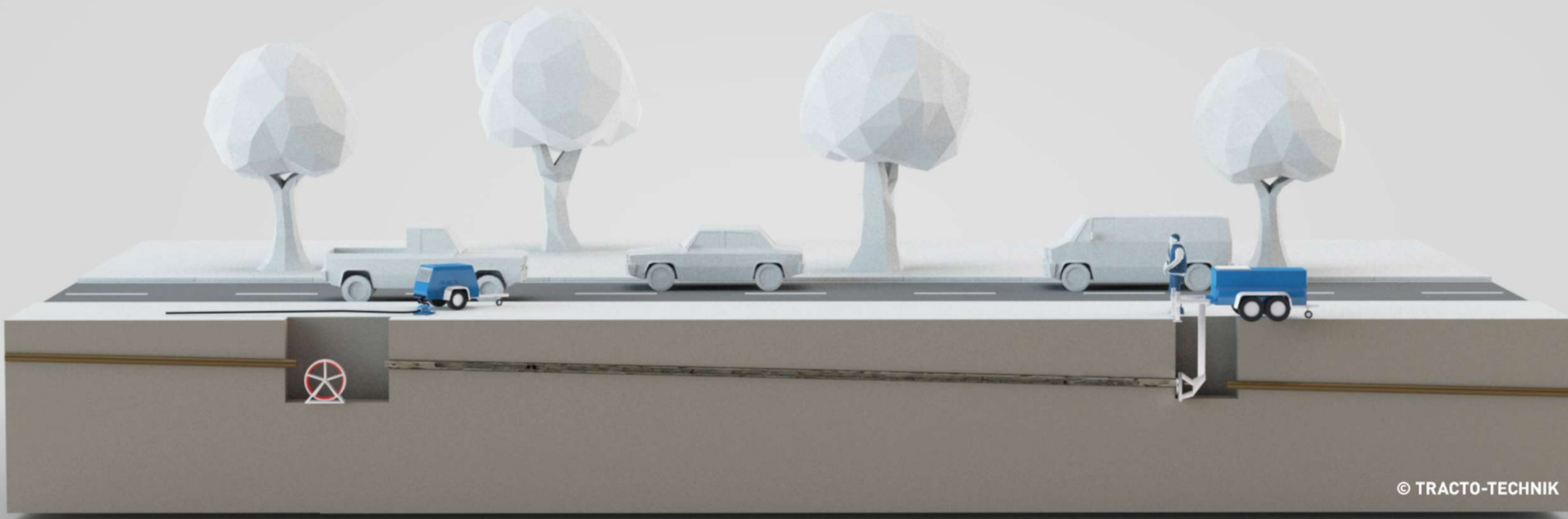
PICTURE SOURCE: IMS ROBOTICS



TRACTO UK | ROGER WAHL

TRACTO

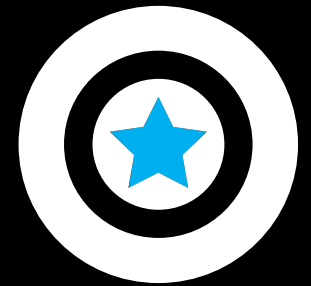
DYNAMIC PIPE BURSTING



TRACTO

TRACTO RANGE

OF DYNAMIC PIPE BURSTERS



TRACTO

DYNAMIC PIPE BURSTERS: GRUNDOCRACK



GRUNDOCRACK	PCG 130		PCG 180		PCG 200		PCG 260		PCG 350	
	METRIC	IMPERIAL	METRIC	IMPERIAL	METRIC	IMPERIAL	METRIC	IMPERIAL	METRIC	IMPERIAL
Machine Ø (mm / in)	130	5.1	180	7.1	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	



TRACTO UK | ROGER WAHL

TRACTO

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



TRACTO UK | ROGER WAHL

TRACTO

DYNAMIC PIPE BURSTING

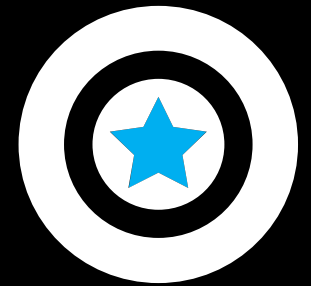


TRACTO UK | ROGER WAHL

TRACTO

PIPE BURSTING

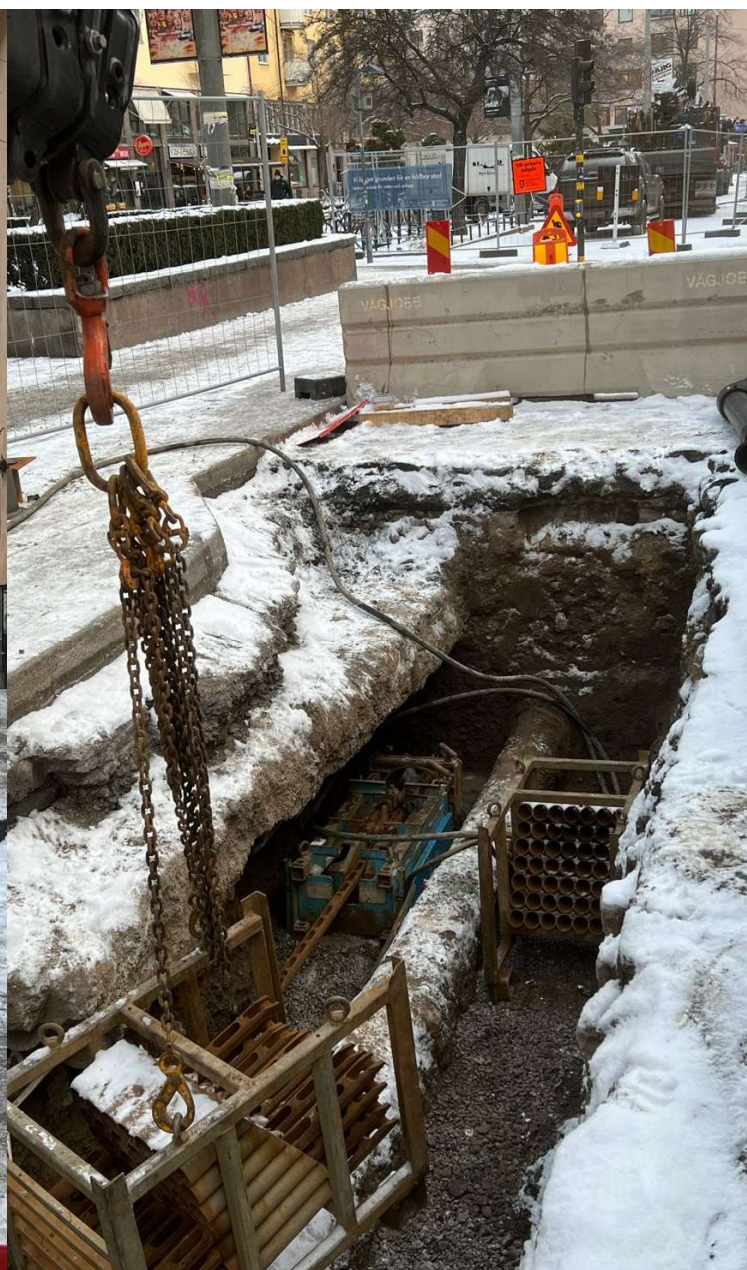
IN ACTION AROUND THE WORLD



TRACTO



Stockholm, Sweden

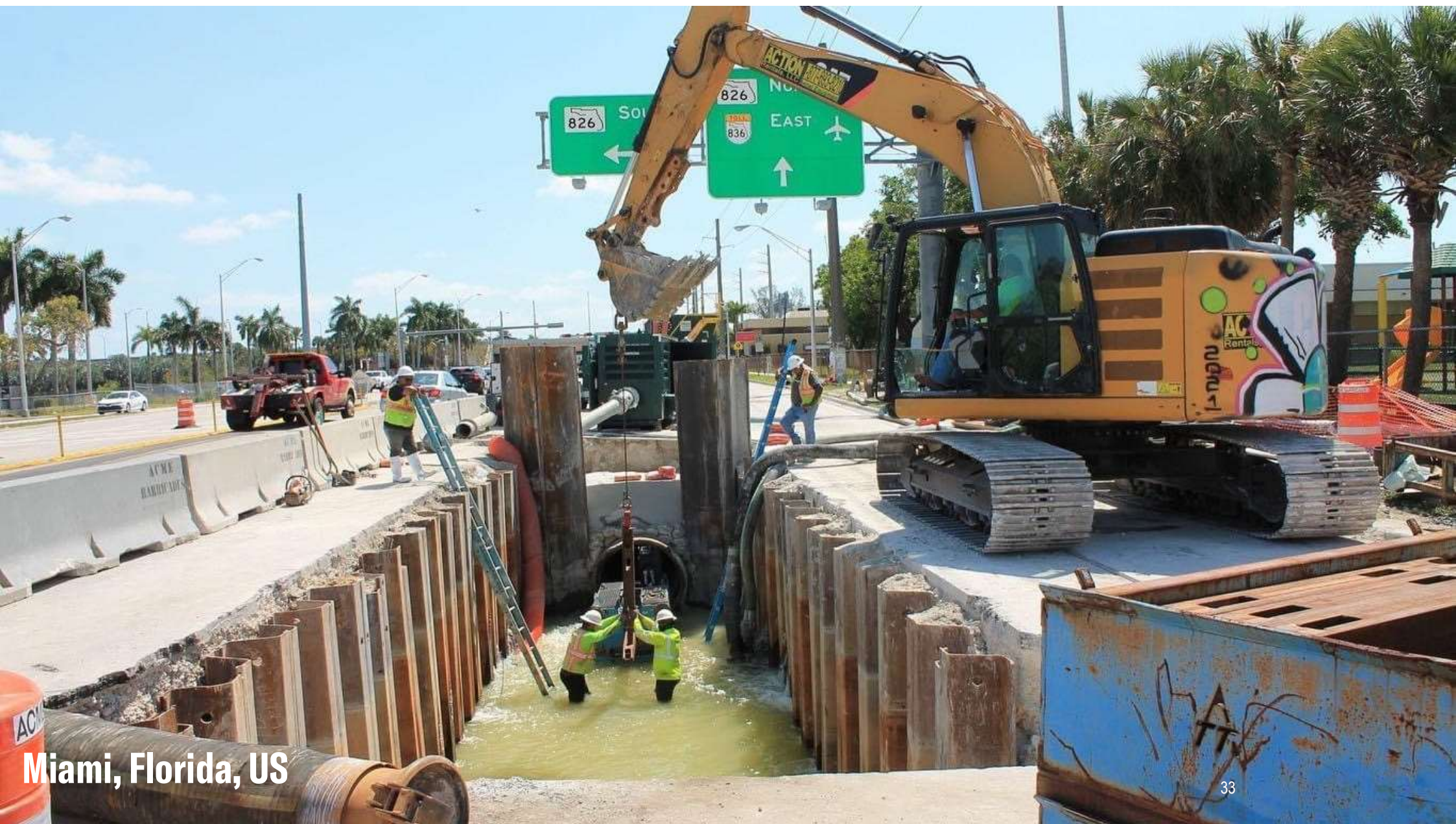






Texas, US





Miami, Florida, US





Rabbat, Morrocco





SUMMARY:

THE FUTURE OF INFRASTRUCTURE RENEWAL IS TRENCHLESS!



THANK YOU

TRACTO