

TERRA-EXTRACTOR TERRA-HYDROCRACK Pipe Replacement

Swiss made







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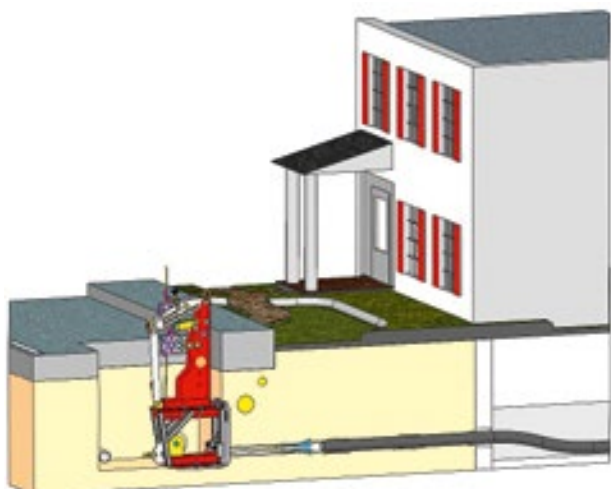


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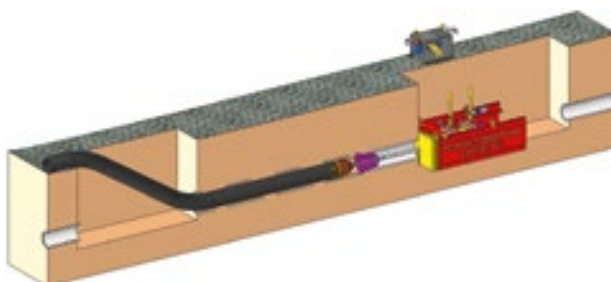
Applications

Pipe bursting



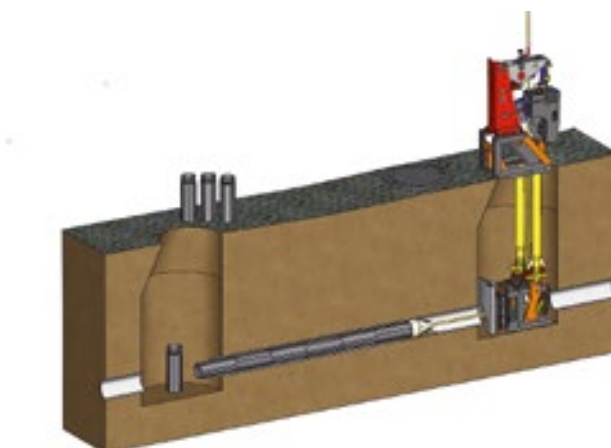
Replacement of old house connections

With the TERRA cable bursters you can replace old water and gas pipes with ease. With special cutting equipment you can cut old plastic, steel or lead pipes.



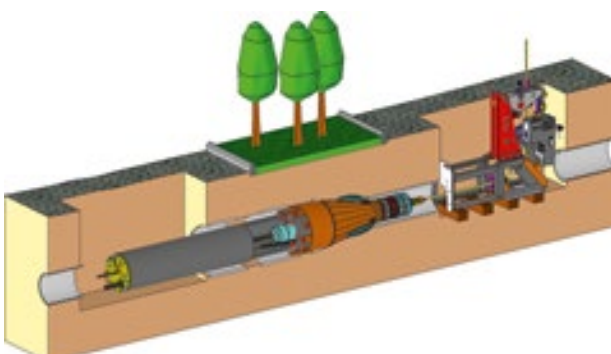
Replacement of main lines

Bigger diameters, like sewer pipes, require stronger machines. With our 40, 60 and 100 tons cable and rod bursters, pipes up to DN 500 mm can be replaced. Roller cutter cut almost all kind of material, such as cast iron, caly ware or even ductile iron.



Replacement with short pipes

For the replacement of old sewer house connections TERRA offers special short pipes with screwed joints. The bursting head is threaded as well. There is no faster way to connect short pipes!

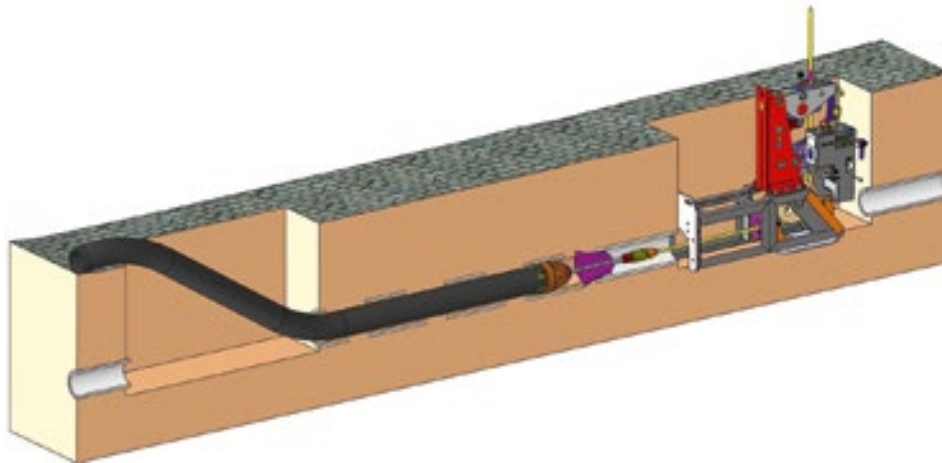


Dynamic bursting with cable bursters and steel pipe rams

TERRA offers dynamic bursting sleeves to increase the pulling force of the cable bursters. Inside of the dynamic bursting sleeve operates a steel pipe ram which increases the operating speed and the power.

Pipe bursting – the cost efficient pipe replacement

Pipe bursting is a cost efficient method because pipes can be replaced without opening the streets. It is also an environmentally friendly method that allows trenchless renewal of any standard pipe. It is a very flexible method of pipe replacement.



TERRA offers cable bursters (TERRA-EXTRACTOR) and rod bursters (TERRA-HYDROCRACK).

The pulling cable of the cable burster and the rods of the rod burster are slid into the old pipe. Then the cutting tool and the expander cone are assembled and are pulled in with the new HDPE pipe.

The pipe burster cracks or cuts the old pipes, expands the bore channel with expander cones and pulls in the new pipe simultaneously.

The new pipes which are pulled in are either long pipes or short pipes.

Advantages of pipe bursting



Money saving:
Compared to open trench methods you save a lot of money and time.



Special tools:
for old plastic, lead and steel pipes.



High-Tech Clamping jaw:
Clamps even dirty and wet cables.



Manhole to manhole:
Pipe replacement without any pit (short pipes).



Pit to pit:
Working in smallest pits possible.



High speed pipe replacement:
145 m/h with automatic cable remote control (X 400).



TERRA

EXTRACTOR X 100



Replacement of old house connections made easy – TERRA-EXTRACTOR X 100

The TERRA-EXTRACTOR X 100 is the ideal machine for the replacement of old house connections. The X 100 replaces old pipes made from lead, plastic and steel. With this cable burster you can burst the smallest pipes with inner diameter \varnothing 12 – 50 mm (1/2" – 2") and pull in new HDPE pipes \varnothing 20 – 63 mm (3/4" – 2.5") in lengths of up to 30 m (100 ft). With a maximum pulling force of 100 kN (10 tons) it is a strong, compact machine.

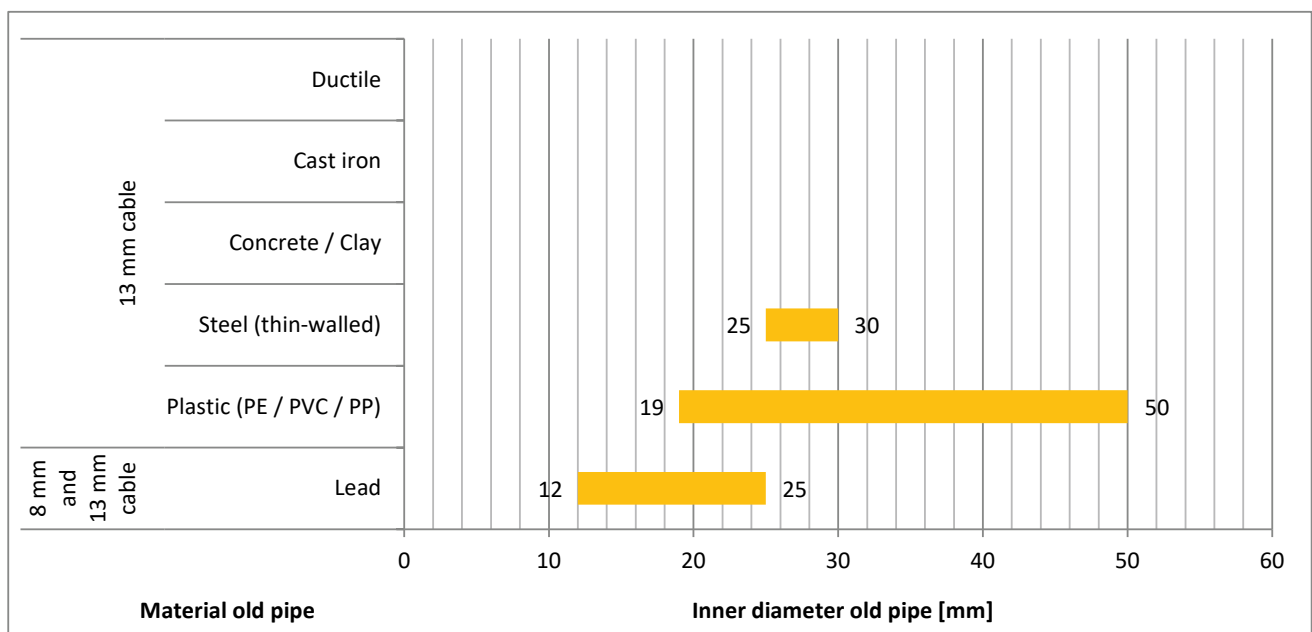
Special cables are available in \varnothing 13 mm and \varnothing 8 mm.

Lead pipe replacement

Our patented two-step process can help replace even lead pipes. The special lead cutters cut the old lead pipe into three stripes.

Quick-Hitch system for mini excavators

With the quick-hitch system the X 100 is connected to any mini excavator. Hydraulics are included, and installation time can be reduced to a minimum.





Dismountable 30 tons cable burster. The TERRA-EXTRACTOR X 300 C

The X 300 C is a compact and dismountable cable burster for replacement of old pipes made from cast iron, steel, clay ware or PE/PVC. With the X 300 C you can burst old pipes from ID 34 – 220 mm (1.5" – 8.5") and pull in new HDPE pipes OD 63 – 180 mm (2.5" – 7") in lengths up to 200 m (600 ft).

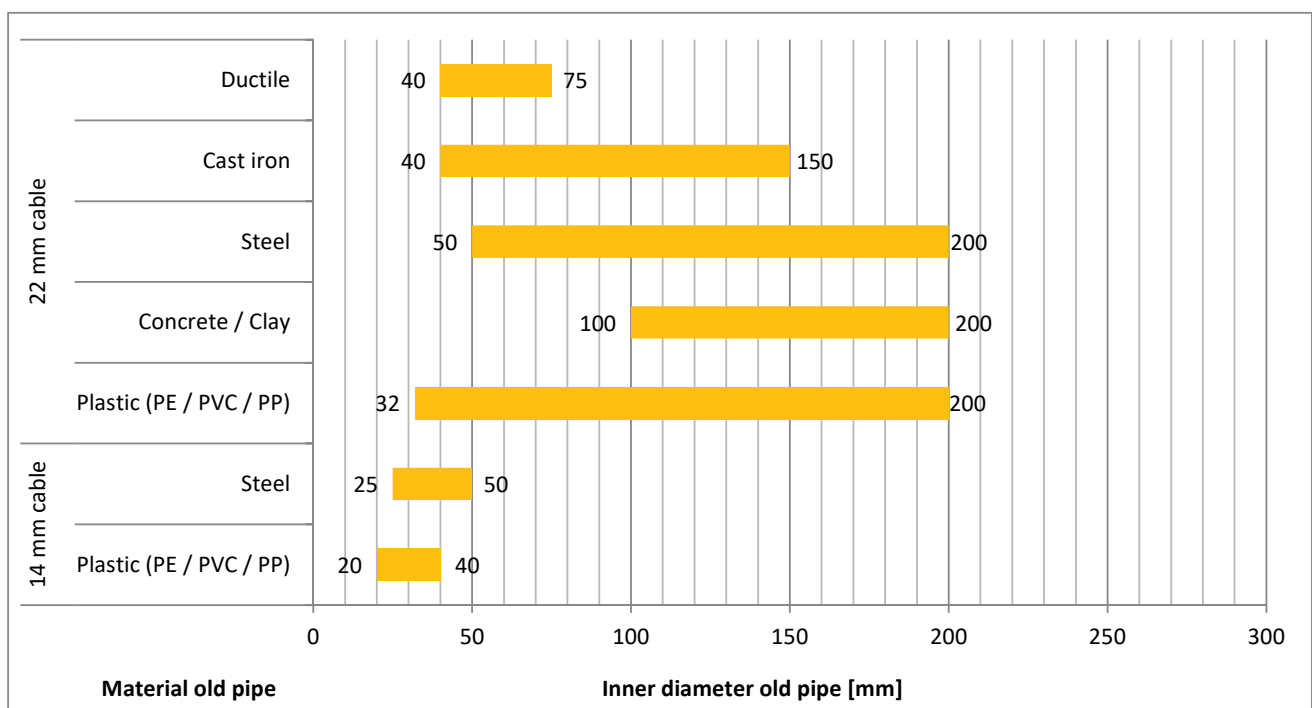
With a maximum pulling force of 300 kN (30 tons) this is one of the best cable bursters on the market. The X 300 C can be installed in manholes of Ø 800 mm (32") with openings Ø 620 mm (25").

Special cables Ø 22 mm and Ø 14 mm are available to burst even the smallest pipe diameters, such as house connections.

Ideal for house connections

The Cable Burster X 300 C can be disassembled easily into components less than 45 kg (100 lbs). Thereby it can be carried into cellar rooms or manholes.

The assembled X 300 C can be lifted at its two lifting eyes.





Pipe replacement of main lines. The TERRA-EXTRACTOR X 400

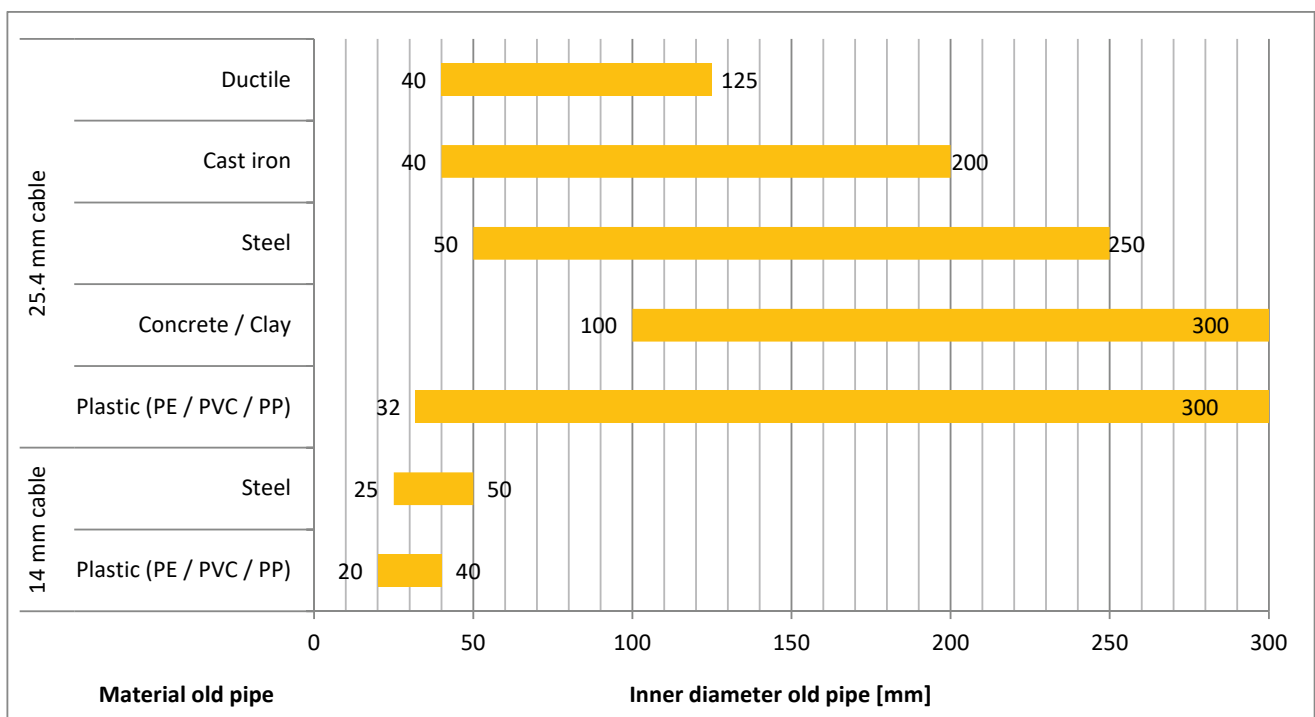
The TERRA-EXTRACTOR X 400 replaces old pipes from 1 ½" (ID 40 mm) up to 10" (ID 250 mm) and is specially designed for the replacement of old gas, water or sewer main lines. Old pipe from cast iron, steel, clayware or PE/PVC can quickly be replaced in lengths up to 200 m.

The X 400 is operated via an electric remote control and has a pulling force of 400 kN (40 tons). New HDPE pipes with OD 63 – 250 mm are pulled in.

Speed with no limit

The TERRA-EXTRACTOR X 400 operates at speeds up to 145 m/h. It is equipped with a pulling force of 400 kN (40 tons) which adapts automatically to the real working conditions.

The TERRA-EXTRACTOR X 400 is powered by a supersilent Diesel power pack which has been designed exactly for this wire burster. As an option remote pressure control is available.





TERRA-EXTRACTOR X 1000 / TERRA-HYDROCRACK HC 600

60 – 100 tons rod bursters

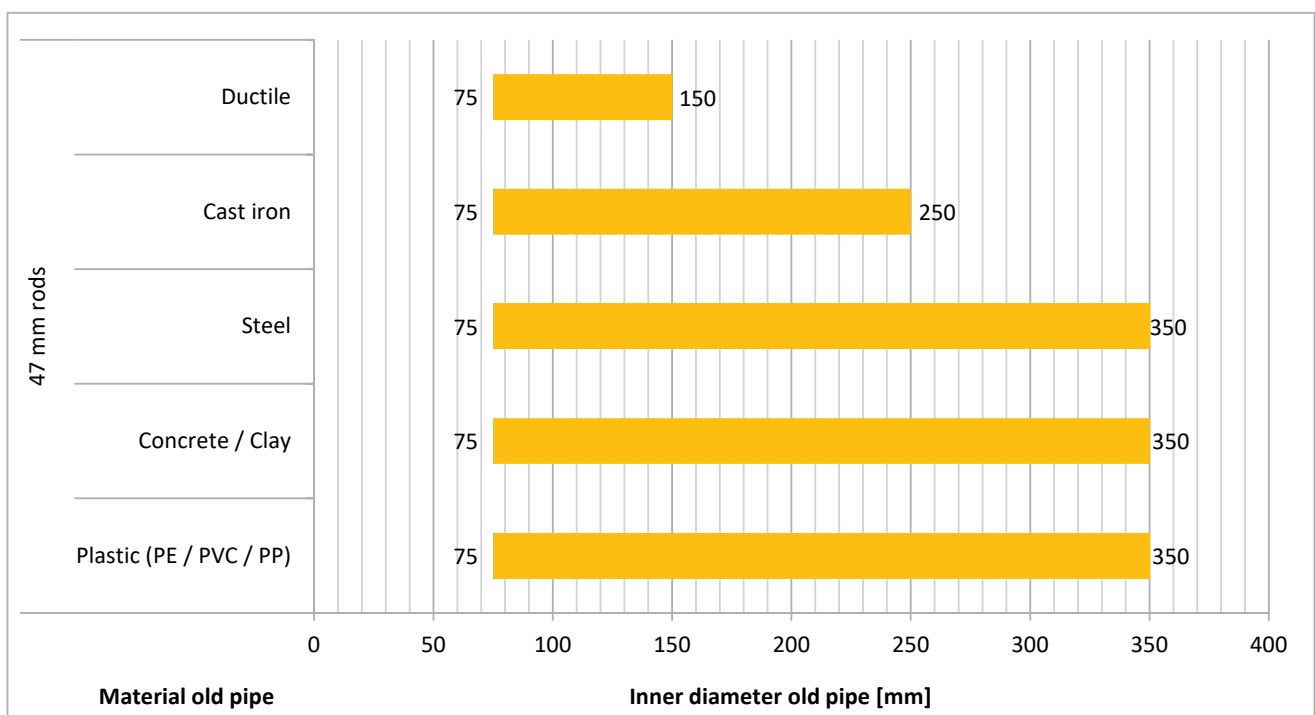
Efficiency, power and speed. Pipe replacement with the rod burster HC 600

The TERRA-HYDROCRACK HC 600 S+ and HC 600 C+ are ideal for pipe replacement of old gas, water or sewer lines. With its pulling force of 600 kN (60 tons) it even splits and cuts old plastic, concrete, steel, ductile and cast iron pipes with inner diameter of 50 mm – 350 mm in lengths up to 150 – 200 m.

Short version or comfort model

The TERRA-HYDROCRACK HC 600 is available in a short model (S+) and in a long comfort model (C+). The short model is only 1.45 m short. In the 3 m long comfort model the operator can sit during operation. This bursting with comfort is easy, fast and comfortable. The operator sits in a protection frame which simultaneously is used as a pit protection. The comfort model needs a 3 m long and a 1 m wide starting pit.

Rods can easily be taken out of the magazine which is under the operator's seat.





Pipe replacement with the rod burster TERRA-EXTRACTOR X 1000

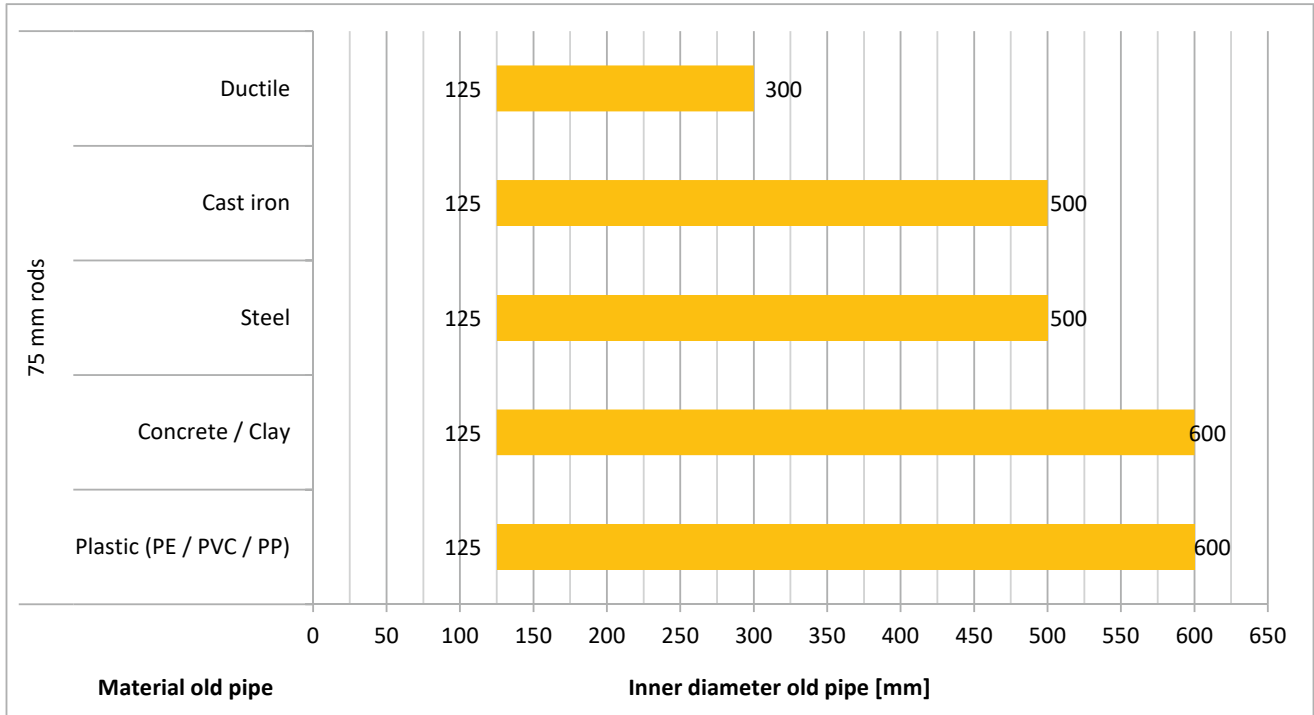
The TERRA-EXTRACTOR X 1000 is one of the most powerful Rod Bursters for the replacement of old pipes \varnothing 100-600 mm (4" - 24") from cast iron, steel, clay ware or PE/PVC. With a maximum pulling force of 100 tonnes at 250 bar, new HDPE pipes up to \varnothing 600 mm can be replaced. Smaller pipes can be replaced over lengths up to 200 m. The operation speed is 96 m/h. Powered by a 142 HP strong JOHN DEERE engine, it fulfills the newest environmental emission norms Stage 5.



100 tons rod burster

Fully automatic rod burster

The rod burster is equipped with a PLC control. The pipe pulling works fully automatic by a push of a button. Several sensors as well as an operational friendly control panel make it easy for the operator to work with the machine. The X 1000 has a rod screw assistant and handy rods.





PE cutters

The PE cutters are equipped with two vertical knives. They cut PE and PVC pipes into two similar halves. The high-quality knives are hardened and polished.



Set of PE cutters

Part Number	Description	OD ¹⁾ [mm]	ID ²⁾ [mm]	Cable [mm]	Models
1951.5248.00	PE pipe cutter 20	20	14-16	Ø 8	X 100
1955.5219.00	PE pipe cutter 25	25	18-21	Ø 13 / 14	X 100 / X 300 C
1951.5218.00	PE pipe cutter 32	32	25-27	Ø 13 / 14	X 100 / X 300 C
1955.5219.05	PE pipe cutter 40	40	32-36	Ø 13 / 14	X 100 / X 300 C / X 400
1955.5254.00	PE pipe cutter 50	50	40-46	Ø 13 / 14	X 100 / X 300 C / X 400
1951.5256.00	PE pipe cutter 50/iso ³⁾	50	40-46	Ø 13 / 14	X 100 / X 300 C
1953.5254.00	PE pipe cutter 50	50	40-46	Ø 25.4	X 400
1955.5255.00	PE pipe cutter 63	63	51-59	Ø 13 / 14	X 100 / X 300 C / X 400
1951.5257.00	PE pipe cutter 63/iso ³⁾	63	51-59	Ø 13 / 14	X 100 / X 300 C
1953.5235.00	PE pipe cutter 63	63	51-59	Ø 25.4	X 400

¹⁾ OD = Outer Diameter PE/PVC pipe

²⁾ ID = Inner Diameter PE/PVC pipe

³⁾ isolation through isolation band

PE swell cutters and swell cones

The PE swell cutters and the PE swell cones cut the PE pipe, which is pushed out of the bore channel into the cable burster into two halves.

The PE swell cutters are equipped with an upper and lower knife. The PE swell cutters are assembled into the swell cone.



Swell cone
40+50

Part Number	Description	OD ¹⁾ [mm]	Models
1955.5276.00	Swell cutter 25 - is assembled into the swell cone 40+50 (1951.5275.00)	25	X 100 / X 300 C
1955.5277.00	Swell cutter 32+40 - is assembled into the swell cone 40+50 (1951.5275.00)	32+40	X 100 / X 300 C
1951.5275.00	Swell cone 40+50	40+50	X 100 / X 300 C
1953.5238.00	Swell cone 50	50	X 400
1953.5239.00	Swell cone 63	63	X 400

¹⁾ OD = Outer Diameter PE/PVC pipe



Swell cutter
32+40



Lead cutter

In Europe there are still more than over 10 millions house connections for fresh water made from lead. Lead endangers the quality of fresh water. The effective EU norms reduce the permitted lead particles from 25 mg/l to the new value of 10 mg/l. To replace these lead pipes, TERRA has designed high-quality lead cutters which cut old lead pipes into three slices.



Set of lead cutters

Part Number	Description	ID ¹⁾ [mm]	OD ²⁾ [mm]	Cable [mm]	Models
1951.5210.02	Lead cutter 1/2"	12	42	Ø 8 mm with APAG M8-left	X 100
1951.5210.01	Lead cutter 1/2"	13	42	Ø 8 with nipple	X 100
1951.5210.00	Lead cutter 1/2"	15	42	Ø 8 with nipple	X 100
1951.5211.03	Lead cutter 3/4"	20	43	Ø 8 with nipple	X 100
1951.5214.00	Lead cutter 1"	29+30	53-55	Ø 8 with nipple	X 100

¹⁾ ID = Inner Diameter PE/PVC pipe

²⁾ OD = Outer Diameter lead cutter

Blocking flansh and chuck for lead cutters

A blocking flange is assembled in the arrival pit which prevents that the old lead pipe is pulled into the ground. It holds the old lead pipe during the bursting procedure. The chuck is used to cut the first part of the old lead pipe.

Part Number	Description	ID ¹⁾ [mm]
1951.5206.00	Blocking flansh 1/2"	12-15
1951.5207.00	Blocking flansh 3/4"	20
1951.5208.00	Blocking flansh 1"	29+30
1951.5203.00	Chuck Ø 7.5 mm	12-29

¹⁾ ID = Inner Diameter PE/PVC pipe



Blocking flansh

Guiding pipe, cable coupling

Part Number	Description	ID ¹⁾ [mm]	Models
1951.5204.00	Guiding pipe 1/2"	13-15	X 100
1951.5201.00	Guiding pipe 3/4"	20	X 100
1951.5605.00	Cable coupling Ø 8 / Ø 13	–	X 100

¹⁾ ID = Inner Diameter lead pipe



Cable coupling Ø 8 / Ø 13



Guiding pipe



Replacement of old steel, clay ware and cast iron pipes

3 wing cutter

3 wing cutter

3 wing cutters are used to cut thin steel pipes. The outer diameter of the body of the knife must be 2 – 4 mm bigger than the inner diameter of the steel pipe.



3 wing cutter

Part Number	Description	ID ¹⁾ [mm]	Cable [mm]	Models
1951.5249.00	3 wing cutter 25	25 (1")	Ø 13 / 14	X 100 / X 300 C
1951.5227.01	3 wing cutter 32-37	32-37 (1.25")	Ø 13 / 14	X 100 / X 300 C
1952.5234.00	3 wing cutter 34-38	34-38 (1.25")	Ø 22	X 300 C
1952.5233.00	3 wing cutter 40-50	40-50 (1.5"+2")	Ø 22 / 25.4	X 300 C / X 400
1951.5229.02	3 wing cutter 50	50 (2")	Ø 13 / 14 / 25.4	X 100 / X 300 C / X 400
1952.5235.00	3 wing cutter 65-90	65-90 (2.5" - 3")	Ø 22 / 25.4	X 300 C / X 400
1950.5222.02	3 wing cutter 75-100	75-100 (3" - 4")	Ø 22 / 25.4	X 300 C / X 400

¹⁾ ID = Inner Diameter steel pipe

3 wing cutter with centering adapter

The 3 wing cutter with centering adapter is designed to cut old steel, cast iron and clay ware (not ductile cast iron). The centering adapter is mounted onto the 3 wing cutter. It centers the tool in the old pipe and prevents the knife from being pushed sideways. All three cutters cut continuously.



3 wing cutter with centering adapter

Part Number	Description	DN ¹⁾ [mm]	Models
1950.5222.01	3 wing cutter 3"+4"	75-100 (3"+4")	X 400 / HC 600 ²⁾
1950.5226.01	3 wing cutter 6"	125-150 (5"+6")	X 400 / HC 600
1950.5228.01	3 wing cutter 8"	200 (8")	X 400 / HC 600
1950.5232.01	3 wing cutter 10"+12"	250+300 (10"+12")	X 400 / HC 600
1950.5271.00	Centering adapter 6"		for 3 wing cutter 6"
1950.5270.00	Centering adapter 8"		for 3 wing cutter 8"
1950.5272.00	Centering adapter 12"		for 3 wing cutter 12"
1957.5241.00	3 wing cutter 12"	300 (12")	X 1000
1957.5242.00	3 wing cutter 16"	400 (16")	X 1000
1957.5243.00	3 wing cutter 20"	500 (20")	X 1000

¹⁾ DN = Diameter Nominal old pipe

²⁾ with X 400 only valid for DN 91-100 mm



Replacement of old steel, clay ware, cast iron and ductile iron pipes

Roller cutter

Roller cutter (1.25" – 2")

The roller cutter is used to cut old steel pipes and is equipped with cutting rolls.

At the rear a long pulling eye and an expander cone are assembled, so that new HDPE pipes can be pulled in.



Roller cutter
1.25" - 2"

Part Number	Description	OD ¹⁾ [mm]	ID-1 ²⁾ [mm]	ID-2 ³⁾ [mm]	ID-3 ⁴⁾ [mm]	Cable [mm]	Models
1950.5316.00	Roller cutter 1 - 1/4"	42.4	37.1	35.9	—	Ø 14	X 300 C / X 400 (opt.: X 100)
1950.5317.00	Roller cutter 1 - 1/2"	51	41	39.8	38.4	Ø 14	X 300 C / X 400 (opt.: X 100)
1950.5318.00	Roller cutter 2"	60.3	54.5	53	51.3	Ø 22	X 300 C / X 400
1950.5319.00	Pulling eye for roller cutter 1.25"-2", for chain 12.5 to						

¹⁾ OD = Outer Diameter old pipe

²⁾ ID-1 = Inner Diameter old pipe (light size)

³⁾ ID-2 = Inner Diameter old pipe (middle size)

⁴⁾ ID-3 = Inner Diameter old (heavy size)

Roller cutter (4" – 20")

The roller cutter is used to cut old pipes made from steel, cast iron, clay ware and ductile iron.

It bursts ductile iron pipes with lowest pulling forces (much less than with static knives).

To reduce the friction in the old pipe, the roller cutters are equipped with wheels. Two lines with each 4 wheels minimise the friction in the old pipe. The wheels are positioned sideways to the cutting rolls, which increases the forces.



Roller cutter
DN 100-150

Roller cutter
DN 200-300

Part Number	Description	OD ¹⁾ [mm]	Models
1950.5213.00	Roller cutter DN 100	100 (4")	X 300 X, X 400, HC 600
1950.5214.00	Roller cutter DN 125	125 (5")	X 400, HC 600
1950.5215.00	Roller cutter DN 150	150 (6")	X 400, HC 600
1950.5310.00	Roller cutter DN 200	200 (8")	HC 600
1950.5312.00	Roller cutter DN 250	250 (10")	HC 600
1950.5314.00	Roller cutter DN 300	300 (12")	HC 600
1957.5225.00	Roller cutter DN 300	300 (12")	X 1000
1957.5226.00	Roller cutter DN 400	400 (16")	X 1000
1957.5227.00	Roller cutter DN 500	500 (20")	X 1000

¹⁾ ID = Inner Diameter old pipe



Chopper disc knife

The chopper disc knives are equipped with chopper discs. They are used to cut big plastic pipes.

Part Number	Description	OD ¹⁾ [mm]
1950.5211.00	Chopper disc knife 110	110
1950.5214.05	PE conversion kit 125/160 ²⁾ – to cut old PE pipes OD 160 mm – for roller cutter DN 125 (1950.5214.00)	160
1950.5215.05	PE conversion kit 150/180 ²⁾ – to cut old PE pipes OD 180 mm – for roller cutter DN 150 (1950.5215.00)	180
1950.5216.00	Chopper disc knife 200	200
1950.5310.05	PE conversion kit 200/225 – to cut old PE pipes OD 225 mm – for roller cutter DN 200 (1950.5310.00)	225
1957.5225.50	PE conversion kit 300/400 ²⁾ – to cut old PE pipes OD 400 mm – for roller cutter DN 300 (1957.5225.00)	400
1957.5226.50	PE conversion kit 400/500 ²⁾ – to cut old PE pipes OD 500 mm – for roller cutter DN 400 (1957.5226.00)	500
1957.5227.50	PE conversion kit 500/600 ²⁾ – to cut old PE pipes OD 600 mm – for roller cutter DN 500 (1957.5227.00)	600

¹⁾ OD = Outer Diameter PE/PVC pipe

²⁾ The conversion kit for the roller cutter consists of several chopper discs, two side bars, set of screws and set of slide bearings.



Chopper disc knife
DN 110



Chopper disc knife DN 160
(PE roller cutter 125 with
PE conversion kit 125/160)



Chopper disc knife
DN 200

**"With the chopper discs there are only vertical cutting forces.
With these discs the old plastic pipe is
not pressed together."**



Expander cones, dynamic bursting sleeves

Expanding accessories

Expander cones

The expander cone displaces the burst old pipe sidewise and increases the bore channel for the new HDPE pipe. The expander cone has to be 20 – 30 % bigger than the new HDPE pipe.



Expander cone 133

Part Number	Description	OD ¹⁾ [mm]	for PE pipes [mm]	Models
1951.5202.00	Distance cone Ø 18/42, L = 80	42		X 100 (cable Ø 8 mm)
1951.5228.01	Distance cone Ø 19/43, L = 25	43		X 100 (cable Ø 13 mm) / X 300 C
1955.5230.00	Distance cone Ø 30/43, L = 170	43		X 300 C
1950.5323.01	Expander cone 80 – for roller cutter 1.25" - 2"	80	<50	X 100 / X 300 C / X 400
1950.5320.00	Expander cone 100 – for roller cutter 1.25" - 2"	100	<63	X 100 / X 300 C / X 400
1950.5245.01	Expander cone 133	133	<80	X 300 / X 400 / HC 600
1950.5246.01	Expander cone 159	159	<110	X 300 / X 400 / HC 600
1950.5246.02	Expander cone 159 (s = 14.2) ²⁾	159	<110	X 300 / X 400 / HC 600
1950.5246.05	Expander cone 169	169	<125	X 300 / X 400 / HC 600
1950.5246.01	Expander cone 194	194	<140	X 300 / X 400 / HC 600
1950.5248.01	Expander cone 219	219	<160	X 300 / X 400 / HC 600
1950.5248.02	Expander cone 219 (s = 16) ²⁾	219	<160	X 300 / X 400 / HC 600
1955.5211.00	Expander cone 220 (with threads)	220	180 (Simona)	for Simona short pipes
1950.5249.00	Expander cone 245	245	<180	X 300 / X 400 / HC 600
1950.5262.00	Expander cone 273	273	<225	X 300 / X 400 / HC 600
1950.5263.00	Expander cone 324	324	<280	X 300 / X 400 / HC 600
1950.5264.00	Expander cone 368	368	<315	X 300 / X 400 / HC 600
1957.5232.00	Expander cone 368	368	<315	X 1000
1950.5266.00	Expander cone 406	406	<355	X 300 / X 400 / HC 600
1957.5233.00	Expander cone 500	500	<400	X 1000
1950.5268.00	Expander cone 559	559	<450	X 300 / X 400 / HC 600
1957.5234.00	Expander cone 625	625	<500	X 1000
1957.5235.00	Expander cone 750	750	<630	X 1000

¹⁾ OD = Outer Diameter

²⁾ With thick wallness, required for ductile cast iron

Dynamic bursting sleeves

The dynamic bursting sleeves allow dynamic bursting. They are driven by a TERRA ram which is in the dynamic bursting sleeve. Small bursters in combination with dynamic bursting sleeves can increase the bore channel.



Dynamic bursting sleeve

Part Number	Description	OD ¹⁾ [mm]	for PE pipes [mm]	Models
1953.5270.00	Dynamic bursting sleeve 203	203	OD 160	X 400 with T 080mini SK - T 135mini F2
1953.5271.00	Dynamic bursting sleeve 299	299	OD 225	X 400 with T 080mini SK - T 135mini F2
1953.5272.00	Dynamic bursting sleeve 457	457	OD 355	X 400 with T 080mini SK - T 135mini F2
1220.1854.00	Dynamic bursting sleeve 610	610	OD 500	X 400 with TR 220 oder TR 360

¹⁾ OD = Outer Diameter

Chuck expander, Pullers (standard)

Part Number	Description	for PE pipes [mm]	Pulling Force [to]
1964.5501.00	Expander chuck 032	32	0.6
1964.5503.00	Expander chuck 040	40	1.0
1964.5505.00	Expander chuck 050	50	1.6
1964.5513.00	Expander chuck 110	110	12
1964.5515.00	Expander chuck 125	125	12



Chuck expander 040

Chuck expander, Pullers (high pulling force)

The outer support sleeve is fixed to the expanders cone. It prevents the expansion of the HDPE pipe during pipe pulling. The front pulling eye is very reliable and allows pulling forces of 11 - 60 tons.

Part Number	Description	for PE Pipes [mm]	Pulling Force [to]
1964.5505.00	Expander chuck 050	50	11
1900.5510.00	Expander chuck 063	63	11
1900.5512.01	Expander chuck 072	72	11
1900.5512.00	Expander chuck 075	75	11
1900.5515.00	Expander chuck 090	90	11
1900.5516.00	Expander chuck 092	92	11
1900.5518.00	Option traceable expander chuck 050 - 092 - for expander chuck 50 - 92 mm		
1900.5520.00	Expander chuck 110	110	25
1900.5520.01	Expander chuck 112	112	25
1900.5525.00	Expander chuck 125	125	25
1900.5523.00	Expander chuck 132	132	25
1900.5524.00	Expander chuck 140	140	25
1900.5526.00	Expander chuck 160	160	25
1900.5527.00	Expander chuck 180	180	25
1900.5528.00	Expander chuck 200	200	25
1900.5529.00	Expander chuck 225	225	25
1900.5530.00	Expander chuck 250	250	25
1900.5522.00	Option traceable expander chuck 110 - 250 - for expander chuck 110 - 250 mm		
1900.5532.01	Expander chuck 280	280	25
1900.5534.01	Expander chuck 315	315	25
1900.5535.01	Expander chuck 355	355	40
1900.5536.01	Expander chuck 400	400	40
1900.5538.01	Expander chuck 450	450	40
1900.5539.01	Expander chuck 500	500	60
1900.5554.01	Expander chuck 560	560	60
1900.5556.01	Expander chuck 630	630	60
1900.5558.01	Expander chuck 710	710	60
1900.5560.01	Expander chuck 800	800	60



Chuck expander 110



Set of expander chucks



Traceable expander chuck

Cables and cable couplings

Machine accessories

Special cables and cable couplings



The compacted cables have a safety factor of 1.5 – 2.0. The pulling cables are reeled and unreeled on a cable drum for easy operation on the jobsite.



Cable drum X 400

Part Number	Description	Cable-Ø [mm]	Length [m]	Pulling Force [to]	Breaking force [to]	Models
1951.5601.15	Pulling cable Ø 8 / 15 m / nipple	Ø 8	15	4	6	X 100
1951.5601.25	Pulling cable Ø 8 / 25 m / nipple	Ø 8	25	4	6	X 100
1951.5601.50	Pulling cable Ø 8 / 50 m / nipple	Ø 8	50	4	6	X 100
1951.5604.15	Pulling cable Ø 8 / 15 m / M8-I ¹⁾	Ø 8	15	2	3	X 100
1951.5604.25	Pulling cable Ø 8 / 25 m / M8-I ¹⁾	Ø 8	25	2	3	X 100
1951.5603.15	Pulling cable Ø 13 / 15 m / M20r	Ø 13	15	10	15.7	X 100
1951.5603.25	Pulling cable Ø 13 / 25 m / M20r	Ø 13	25	10	15.7	X 100
1951.5603.30	Pulling cable Ø 13 / 30 m / M20r	Ø 13	30	10	15.7	X 100
1951.5603.50	Pulling cable Ø 13 / 50 m / M20r	Ø 13	50	10	15.7	X 100
1951.5603.75	Pulling cable Ø 13 / 75 m / M20r	Ø 13	75	10	15.7	X 100
1951.5603.80	Pulling cable Ø 13 / 100 m / M20r	Ø 13	100	10	15.7	X 100
1951.5603.90	Pulling cable Ø 13 / 125 m / M20r	Ø 13	125	10	15.7	X 100
1951.5603.97	Pulling cable Ø 13 / 200 m / M20r	Ø 13	200	10	15.7	X 100
1952.5605.15	Pulling cable Ø 14 / 15 m / M22-r	Ø 14	15	14	20	X 300 C / X 400
1952.5605.25	Pulling cable Ø 14 / 25 m / M22-r	Ø 14	25	14	20	X 300 C / X 400
1952.5605.30	Pulling cable Ø 14 / 30 m / M22-r	Ø 14	30	14	20	X 300 C / X 400
1952.5605.50	Pulling cable Ø 14 / 50 m / M22-r	Ø 14	50	14	20	X 300 C / X 400
1952.5605.95	Pulling cable Ø 14 / 120 m / M22-r	Ø 14	120	14	20	X 300 C / X 400
1955.5615.00	Pulling cable Ø 22 / 15 m / M36-I	Ø 22	15	30	45	X 300 C
1955.5625.00	Pulling cable Ø 22 / 25 m / M36-I	Ø 22	25	30	45	X 300 C
1955.5650.00	Pulling cable Ø 22 / 50 m / M36-I	Ø 22	50	30	45	X 300 C
1955.5675.00	Pulling cable Ø 22 / 75 m / M36-I	Ø 22	75	30	45	X 300 C
1955.5692.00	Pulling cable Ø 22 / 100 m / M36-I	Ø 22	100	30	45	X 300 C
1955.5694.00	Pulling cable Ø 22 / 125 m / M36-I	Ø 22	125	30	45	X 300 C
1955.5696.00	Pulling cable Ø 22 / 220 m / M36-I	Ø 22	220	30	45	X 300 C
1953.5601.25	Pulling cable Ø 25.4 / 25 m	Ø 25.4	25	40	60	X 400
1953.5601.50	Pulling cable Ø 25.4 / 50 m	Ø 25.4	50	40	60	X 400
1953.5601.75	Pulling cable Ø 25.4 / 75 m	Ø 25.4	75	40	60	X 400
1953.5601.95	Pulling cable Ø 25.4 / 100 m	Ø 25.4	100	40	60	X 400
1953.5601.96	Pulling cable Ø 25.4 / 125 m	Ø 25.4	125	40	60	X 400
1953.5601.97	Pulling cable Ø 25.4 / 150 m	Ø 25.4	150	40	60	X 400
1953.5601.98	Pulling cable Ø 25.4 / 250 m	Ø 25.4	250	40	60	X 400
1953.8220.00	Reel frame					X 100 / X 300 C / X 400
1953.4602.00	Cable drum X 400	Ø 25.4	150	40	60	X 400
1951.5605.00	Pulling cable Ø 8 / Ø 13 ¹⁾ – to connect the cable Ø 8 mm with nipple with the cable Ø 13 mm					
1951.5607.00	Pulling cable Ø 8 / Ø 13/M8-I ¹⁾ – to connect the cable Ø 8 mm with APAG M8 left with the cable Ø 13 mm					
1953.5240.00	Pulling cable Ø 25.4					

¹⁾ for lead pipes 1/2" with inner diameter ID=12 mm

Rear support accessories

During bursting from pit to pit the cable burster is supported by a front box and a rear blade in the pit. The bursting tools can be disassembled in the pit. The new HDPE pipe is pulled into the front box. During bursting from manhole to manhole the burster or a manhole frame is installed in the manhole.

Part Number	Description	Models
1951.4050.00	Quick-Hitch system for mini excavator X 100	X 100
1955.4050.00	Quick-Hitch system for mini excavator X 300 C	X 300 C
1955.4052.00	Quick-Hitch system LIKUFIX 33	X 300 C
1951.4103.00	Frontbox L = 0.3 m	X 100
1955.4105.00	Frontbox L = 0.2 m	X 300 C
1955.4104.00	Frontbox L = 0.3 m	X 300 C
1952.4136.00	Frontbox L = 0.8 m	X 400
1955.4502.00	Front plate, curved, for manhole Ø 800 mm	X 300 C
1955.4135.00	Front plate, curved, for manhole Ø 1'000 mm	X 300 C
1953.4500.00	Manhole frame	X 400
1953.4544.00	Connecting plate 40 to	X 400
1953.4541.00	Single pole 40 to, L = 2.3 m	X 400
1953.4542.00	Single pole 40 to, L = 3.3 m	X 400



X 400 with front box

Clamping jaws

Special clamping jaws with patented longitudinal grooves allow for safe clamping of even dirty and wet cables.

Part Number	Description	Cable-Ø [mm]	Models
1951.4223.03	Clamping jaw Ø 8	Ø 8	X 100
1951.4219.02	Clamping jaw Ø 13	Ø 13	X 100
1952.4207.02	Clamping jaw Ø 14	Ø 14	X 300 C / X 400
1952.4203.02	Clamping jaw Ø 22	Ø 22	X 300 C
1953.4203.02	Clamping jaw Ø 25.4	Ø 25.4	X 300 C / X 400
1950.4214.02	Clamping jaw HC 600 for rod		HC 600 S+ / C+
1957.4219.00	Clamping jaw X 1000 for rod		X 1000



Clamping jaw

Rods

Part Number	Description	Length [m]	Rod-Ø [mm]	Threads	Models
1957.5600.00	Rod X 1000	1.72	Ø 75 ¹⁾	API-55	X 1000
1957.5230.00	Pusher X 1000	0.14	Ø 85	API-55	X 1000
1950.5600.01	Rod 1.0 m	1.00	Ø 47	API-36	HC 600
1950.5613.00	Rod 0.65 m	0.65	Ø 47	API-36	HC 600 / X 300 C / X 400
1950.5610.02	Rod 0.4 m	0.40	Ø 47	API-36	HC 600
1950.5611.00	Rod 0.25 m	0.25	Ø 47	API-36	HC 600 / X 300 C / X 400
1950.5612.00	Rod 0.125 m	0.125	Ø 47	API-36	HC 600 / X 300 C / X 400
1950.5640.00	Guiding Rod	0.5	Ø 30	API-27	HC 600
1950.5650.00	Guiding Head	0.06	Ø 30	API-27	HC 600
1950.5630.00	Adapter	0.44	Ø 47/30	API-36 to 27	for guiding rod

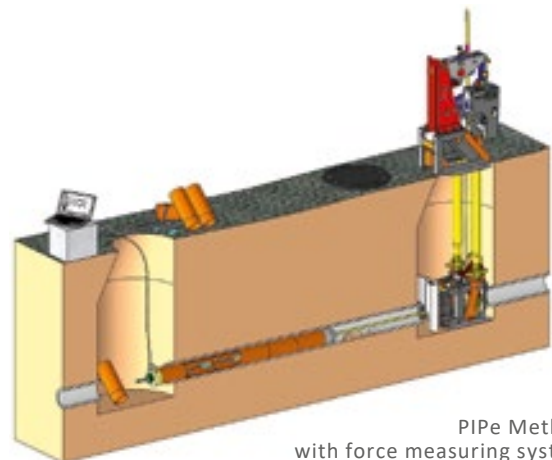
¹⁾ every 430 mm reduced to Ø 51 mm

PIPe Method (pipe in pipe)

Pulling of short pipes

PIPe Method

PIPe is TERRA's Pipe-In-Pipe Close-Fit Trenchless system, undertaken from manhole to manhole without requiring the excavation of launch or recovery pits. The system is comprised of a TERRA-EXTRACTOR cable burster, calibre head, pipe rods, tensioning plate, pipe force measuring system and pipe computer to provide the state of the art pipe-line renovation system. The calibre head opens the old pipe to its original diameter without bursting it, reinstates the circular profile where the old pipe is cracked, ovalised, off-set or damaged, and allows new short sections of pipes to be installed.



PIPe Method
with force measuring system

PIPe tensioning plate

Part Number	Description	DN ¹⁾ [mm]
1953.5200.00	PIPe Tensioning 150	150
1953.5201.00	PIPe Tensioning 200	200
1953.5202.00	PIPe Tensioning 250	250
1953.5203.00	PIPe Tensioning 300	300
1953.5204.00	PIPe Tensioning 350	350
1953.5205.00	PIPe Tensioning 400	400
1953.5205.10	PIPe Tensioning 500	500

¹⁾ DN = Diameter Nominal old pipe



PIPe Calibration Head
+ Short Pipe
+ Tensioning Plate

PIPe rods

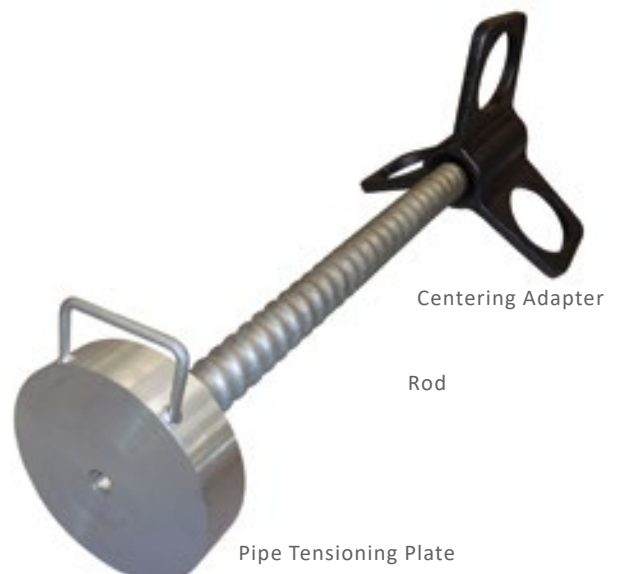
Part Number	Description	Length [m]
1953.5260.00	PIPe Rod	0.60
1953.5261.00	PIPe Rod	0.70
1953.5266.00	PIPe Rod	1.00
1953.5262.00	PIPe-Connection	
1953.5263.00	PIPe-Nut	
1953.5264.01	PIPe Centering Adapter DN 500*	

* other sizes on request

PIPe calibration head

Part Number	Description	DN ¹⁾ [mm]
1953.5206.00	Calibration head 150	150
1953.5210.00	Calibration head 200	200
1953.5215.00	Calibration head 250	250
1953.5220.00	Calibration head 300	300
1953.5225.00	Calibration head 350	350
1953.5230.00	Calibration head 400	400

¹⁾ DN = Diameter Nominal old pipe



Centering Adapter

Rod

Pipe Tensioning Plate

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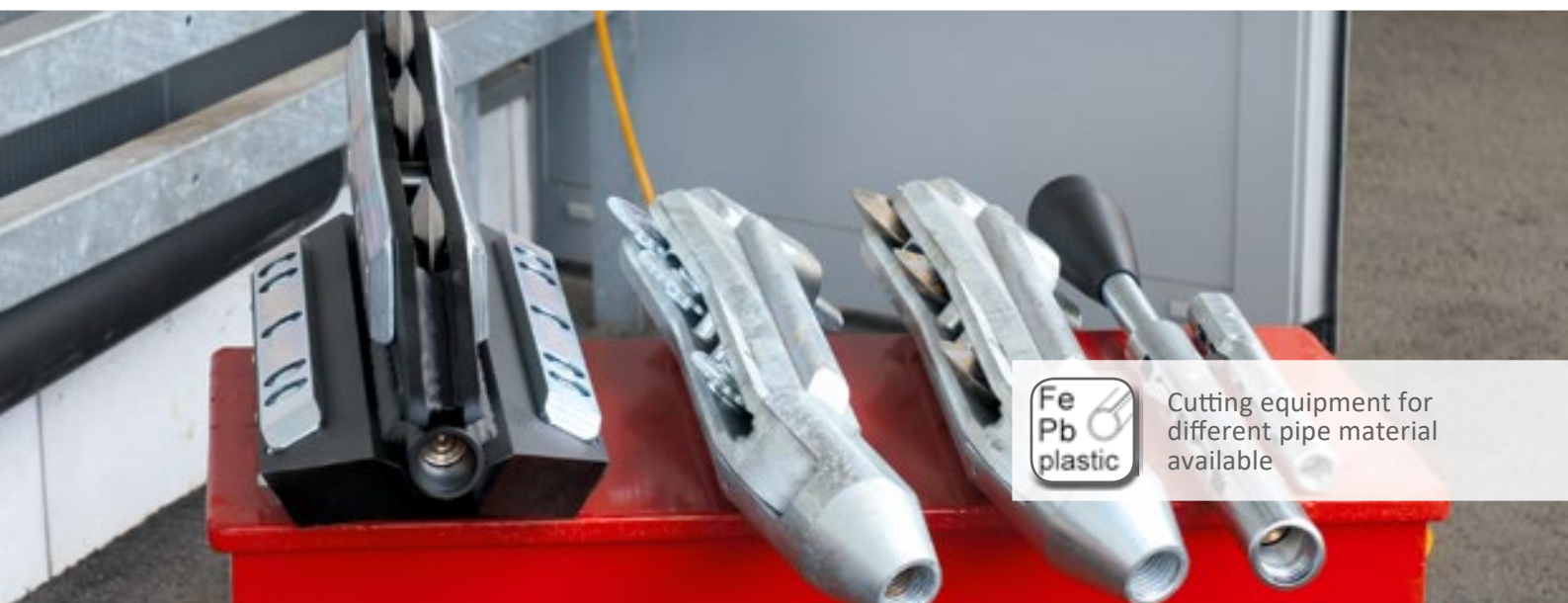
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