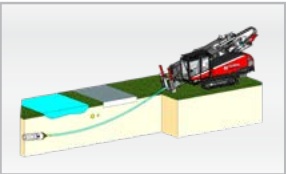
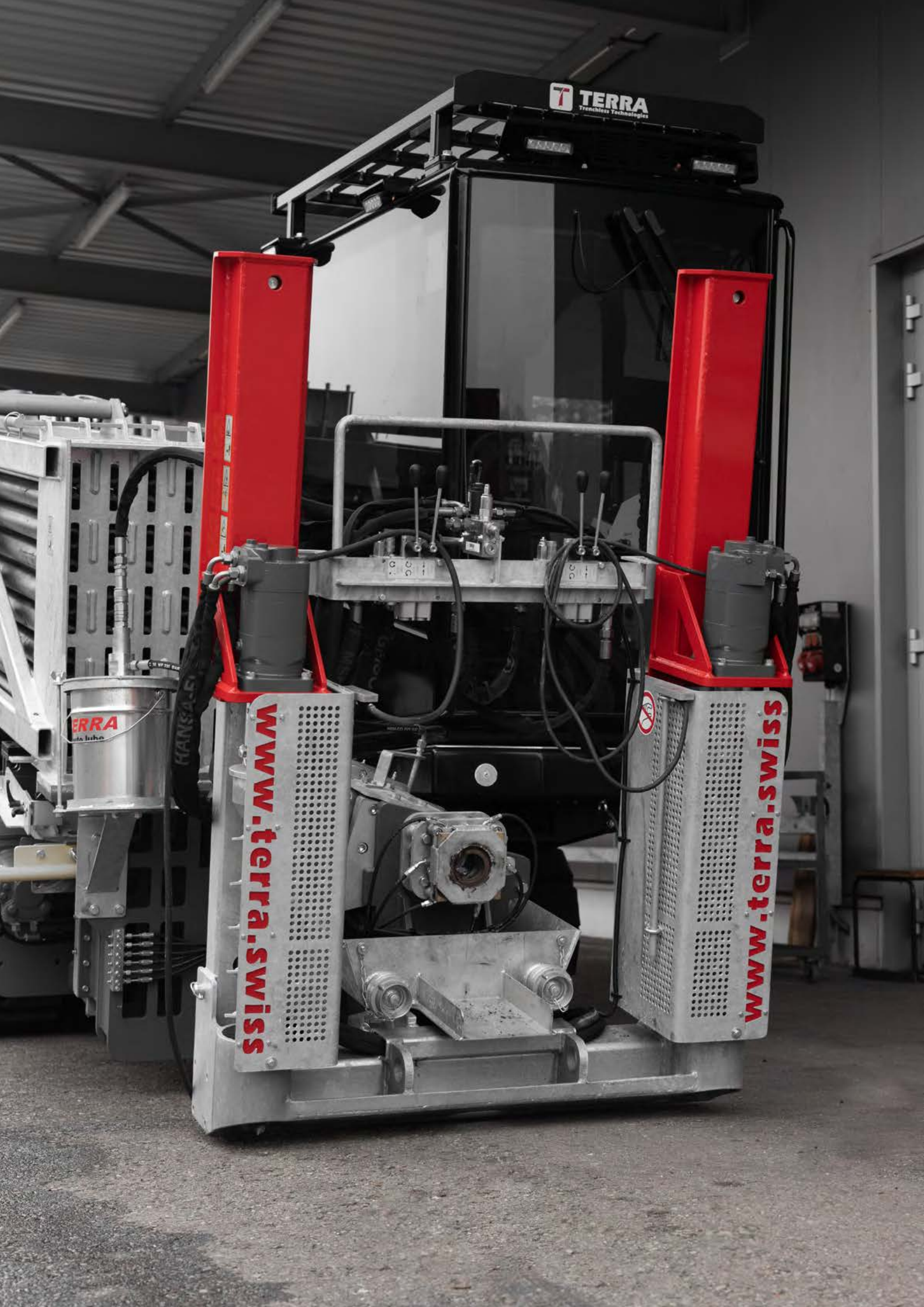




TERRA-JET Horizontal Directional Drills Tooling Catalog



TERRA
Trenchless Technologies



TERRA-JET
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TERRA-JET Horizontal Directional Drills Overview

Technical Specifications

				
	DJ 10	DJ 13	DJ 20	DJ 23
OPERATION				
Thrust/Pullback force	4 t	6 t	9 t	11 t
Spindle torque, max.	1.800 Nm	2.300 Nm	2.840 Nm	3.100 Nm
Spindle speed, max.	200 rpm	225 rpm	228 rpm	285 rpm
Carriage travel speed, max.	55 m/min	40 m/min	40 m/min	43 m/min
Bore diameter, min.	60 mm	60 mm	60 mm	65 mm
Ground travel speed	4.5 km/h	4.5 km/h	4.5 km/h	3.2 km/h
POWER				
Engine	Hatz 4H50TICD	Hatz 4H50TICD	Hatz 4H50TICD	Deutz TCD 3.6L4
Gross horsepower (Tier 4 final)	75 HP	75 HP	75 HP	101 HP
Fuel type	Diesel	Diesel	Diesel	Diesel
Engine rpm, max.	2.300 rpm	2.300 rpm	2.700 rpm	2400 rpm
DRILLING FLUID SYSTEM (onboard)				
Drilling fluid volume, max.	95 l/min	95 l/min	95 l/min	185 l/min
Drilling fluid pressure, max.	70 bar	70 bar	70 bar	75 bar
DRILL PIPE				
Drill rod, length	2.0 m	2.0 m	3.05 m	3.05 m
Drill rod, diameter	ø 50/42 mm	ø 57/52 mm	ø 60/54 mm	ø 60/54 mm
Bending radius, min.	30 m	28 m	34 m	34 m
Onboard capacity	90 m	70 m	120 m	158 m
DIMENSIONS				
L x W x H	4.3 x 1.2 x 2.3 m	4.3 x 1.3 x 1.9 m	6.0 x 1.7 x 1.9 m	6.1 x 1.8 x 2.5 m
Drill rack entry angle	33 - 50 °	18 - 40 °	29 - 40 °	19 - 40 °
Weight (incl. drill rods)	3.6 t	4.3 t	6.4 t	8.5 t
Weight (w/o drill rods)	3.1 t	3.6 t	5.3 t	7.1 t
NOISE LEVEL				
Operator sound	85 dB (A)	85 dB (A)	85 dB (A)	79 dB (A)
Exterior sound power	104 dB (A)	104 dB (A)	104 dB (A)	104 dB (A)

*All data depending on ground conditions. Technical Data may change without prior notice.

Versatile Application Possibilities

With state-of-the-art technology TERRA HDD machines lay pipes for electricity, gas and water environmentally friendly. Whether in inner-city or rural areas, with TERRA's wide range of products there is always a solution for laying the supply lines optimally.



TERRA - always one drill ahead!

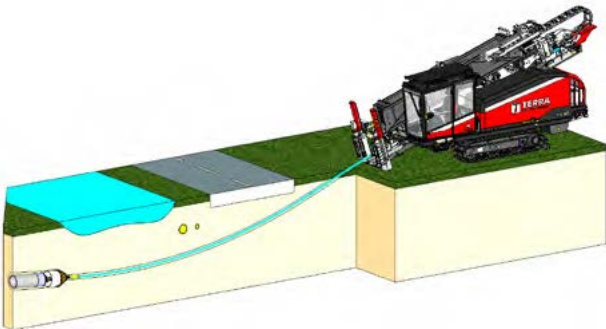
Technical Specifications

				
	DJ 23 AT	DJ 40	DJ 40 AT	DJ 66e
OPERATION				
Thrust/Pullback force	11 t	18 t	18 t	30 t
Spindle torque, max.	4.000 Nm	8.000 Nm	8.000 Nm	12.500 Nm
Spindle speed, max.	330 rpm	255 rpm	255 rpm	230 rpm
Carriage travel speed, max.	43 m/min	44 m/min	44 m/min	60 m/min
Bore diameter, min.	110 mm	140 mm	140 mm	160 mm
Ground travel speed	3.2 km/h	3.2 km/h	3.2 km/h	2.7 km/h
POWER				
Engine	Deutz TCD 3.6L4	Perkins-1204J	Perkins-1204J	Batterie
Gross horsepower (Tier 4 final)	101 HP	189 HP	189 HP	200 kVA
Fuel type	Diesel	Diesel	Diesel	elektrisch
Engine rpm, max.	2.400 rpm	1.800 rpm	1.800 rpm	-
DRILLING FLUID SYSTEM (onboard)				
Drilling fluid volume, max.	185 l/min	510 l/min	510 l/min	extern
Drilling fluid pressure, max.	75 bar	70 bar	70 bar	-
DRILL PIPE				
Drill rod, length	2.85 m	4.57 m	4.57 m	4.57 m
Drill rod, diameter	ø 82/76 mm	ø 79/76 mm	ø 95/78 mm	ø 92/89 mm
Bending radius, min.	35 m	34 m	52 m	60 m
Onboard capacity	103 m	228 m	146 m	137 m
DIMENSIONS				
L x W x H	6.1 x 1.8 x 2.5 m	8.1 x 2.2 x 2.7 m	8.1 x 2.2 x 2.7 m	9.5 x 2.3 x 3.1 m
Drill rack entry angle	19 - 40 °	19 - 36 °	19 - 36 °	19 - 58 °
Weight (incl. drill rods)	8.5 t	17.3 t	17.3 t	20 t
Weight (w/o drill rods)	7.1 t	13.7 t	13.7 t	16.8 t
NOISE LEVEL				
Operator sound	85 dB (A)	79 dB (A)	85 dB (A)	50 dB (A)
Exterior sound power	104 dB (A)	104 dB (A)	104 dB (A)	65 dB (A)

*All data depending on ground conditions. Technical Data may change without prior notice.

TERRA-JET Technology

TERRA Horizontal Directional Drills maximize precision and productivity. Intelligent drilling assistance systems in combination with high bentonite flow rate enable drilling in even difficult subsoil.



TERRA-JET DJ 40 / DJ 40 AT

Horizontal Directional Drills

Cabin with hands-free device

The DJ 40 is characterized by a large, comfortable cabin with hands-free system, air conditioning and cool box. These additional comfort features enable efficient work in a wide range of weather conditions.



Max. pulling force: 18 t
Max. torque: 8'000 Nm
Max. drill rod rotation speed: 255 rpm
PERKINS (Stage Euro 5), 139 kW (189 HP)
Max. drilling fluid volume: 510 l/min
Drills up to: 400 m / Ø 800 mm
Drill rods on board: 230 m



189 HP strong PERKINS Diesel engine

Built from our customer's feedback and input, the DJ 40 is a modern evolution of productive and enhanced horizontal directional drill units designed by TERRA. Powered by a proven 189 HP strong PERKINS Diesel engine (Euro Stage 5) the TERRA-JET DJ 40 offers up to 18 tons of thrust and pullback force, 8.000 Nm of rotational torque and a maximum spindle speed of 255 rpm. A combination you need for outstanding productivity on big installation jobs, to work more efficiently with less downtime.

Onboard Fluid Pump

The onboard, enclosed 510 l/min strong fluid pump leads to productive drilling at greater distances. The flow rate can be adjusted simultaneously with thrust, pullback and rotation. A sensor measures the flow rate continuously. If the tank is empty, the sensor closes the valve which leads to a long lifetime of the seals inside the fluid pump.

Oscillating Drill Ramp (patent)

The DJ 40 is equipped with an oscillating drill ramp. The drill ramp can move from 11° - 20° (19% - 38%). The steel rubber crawler stays at ground for full stability.

Also available as a rock drilling rig

Also available as a rock drilling rig The DJ 40 is available as an AT (All Terrain) rock drilling rig. The DJ 40 AT has 137 m dual rods on board.

Your advantages of the TERRA-JET DJ 40

255
1/min

Fast with highest rotation speed:
255 rpm on the drill rod



AutoTork:
Hydraulic-electronic control of rotation
speed and torque



ADBS:
Automatic drilling and backreaming
system



Carve mode:
Easy steering also in hard ground
conditions



Cruise control:
Drilling by a push of a button



Thrust control:
Automatic adjustment of pullback
force

Hydraulically rotatable cabin

The DJ 23 elevates drilling performance with its hydraulically rotatable cabin, allowing the driller to effortlessly adjust their position from 0°-60° - making sure they are always in optimal control of each job.

Compact design

The DJ 23 offers improved maneuverability in tight spaces, with a sleek design designed to fit through entrances as narrow as 6 feet. Controlled by remote for optimum speed and safety, this machine is ideal for projects that require precise navigation in small areas.



TERRA-JET DJ 23 / DJ 23 AT

Horizontal Directional Drills



Max. pulling force: 11 t
Max. torque: 3.100 Nm
Max. drill rod rotation speed: 284 rpm
DEUTZ (Euro Stage 5), 75 kW (101 HP)
Max. drilling fluid volume: 185 l/min
Drills up to: 150 m / Ø 420 mm
Drill rods on board: 160 m



101 HP strong Deutz Diesel Engine

TERRA-JET DJ 23 is the next generation horizontal directional drill, designed by TERRA to offer enhanced productivity and durability. TERRA-JET DJ 23 is a horizontal directional drill unit designed for the most challenging projects. Powered by a DEUTZ Diesel engine with 101 HP (Euro Stage 5), this drill offers up to 11 tons of thrust and pullback force, 3.100 Nm of torque and a maximum spindle speed of 284 rpm. Thanks to its high productivity, the DJ 23 is the ideal HDD directional drilling rig for laying supply lines such as fiber optical cables.

Unique operating concept

Intelligent operating elements such as the thrust control, the automatic carve mode or the cruise control make drilling much easier for the operator. The integrated AutoTork regulates the pullback speed within milliseconds.

Also Available as a Rock Drilling Machine

The DJ 23 is also available as an AT version. The DJ 23 AT is standardly equipped with 36x double rods with a total length of 103 m. The outer rod reaches a rotational torque of up to 4.000 Nm. The inner rod rotates with up to 300 rpm for highest productivity.

Your advantages of the TERRA-JET DJ 23

284
1/min

Fast with highest rotation speed:
284 rpm on the drill rod



AutoTork:
Hydraulic-electronic control of rotation
speed and torque



ADBSe:
Automatic drilling and backreaming
system



Carve mode:
Easy steering also in hard ground
conditions



Cruise control:
Drilling by a push of a button



Thrust control:
Automatic adjustment of pullback
force

75 hp Hatz diesel engine (Euro stage 5)

The TERRA-JET DJ 20 delivers up to 9 tonnes of thrust and pullback force, 2,800 Nm of rotational torque and a rotational spindle speed of 228 rpm.



Max. pulling force: 9 t
Max. torque: 2.840 Nm
Max. Drehzahl: 228 rpm
HATZ (Euro Stage 5), 55 kW (75 HP)
Max. drilling volume: 95 l/min
Drills up to: 120 m / Ø 360 mm
Drill rods on board: 120 m



75 HP strong Hatz Diesel engine

The TERRA-JET DJ 20 Horizontal Directional Drill is the perfect choice for those who need power and performance in a compact, user-friendly package. Featuring a 75 HP HATZ (Euro Stage 5) diesel engine, this powerful machine delivers up to 9 tons of thrust and pullback force, 2.840 Nm of torque and a maximum spindle speed of 228 rpm.

Designed for Productivity

Its small footprint ensures easy maneuverability when operating in tight spaces, while its low noise levels keep the workplace quiet – making it a great drill to use in both urban and rural jobsites. Its fast setup time allows it to be highly productive and easy transportation between job sites.

The TERRA-JET DJ 20 offers the operator complete control and comfort. Its spacious cabin can be rotated up to 60° – offering ultimate comfort and convenience throughout your workday. It also incorporates LED lighting so you can keep working in the dark.

High Mud Flow Rate With Boost Mode

The onboard high-pressure FMC delivers an increased drilling volume of 95 l/min that helps to drill in various challenging ground conditions. With the boost mode, the operator can utilize additional power momentarily to overcome any tough spots.

Your advantages of the TERRA-JET DJ 20

228
1/min

Fast with highest rotation speed:
228 rpm on the drill rod



Carve mode:
Easy steering also in hard ground conditions



Wide operators cabin:
Comfortable and rotatable cabin



Cruise control:
Drilling by a push of a button



ADBS:
Automatic drilling and backreaming system



Thrust control:
Automatic adjustment of pullback force

Small and compact

Moving into tight spaces has never been easier. The DJ 13 offers a compact design and enhanced mobility, allowing it to fit through doorways as narrow as 1.3 m. Additionally, its rubber crawler system safeguards any surface encountered along the way.

High productivity

With a flow rate of 95 l/min, the DJ 13 has the highest flow rate in its class. For very challenging ground conditions, even 160 l/min is available as an option.



Max. pulling force: 6 t
Max. torque: 2.300 Nm
Max. rotation speed: 225 rpm
HATZ (Euro Stage 5), 55 kW (75 HP)
Max. drilling volume: 95 l/min
Drills up to: 120 m / Ø 300 mm
Drill rods on board: 70 m



75 HP strong HATZ Diesel Engine

Powered by a proven 75 HP strong HATZ Diesel engine (Stage 5) the TERRA-JET DJ 13 offers up to 6 tons of thrust and pullback force, 2.300 Nm of torque and a maximum spindle speed of 225 rpm. The small footprint and the reduced noise level at the operator's ear make the TERRA-JET DJ 13 user-friendly and sustainable. The fast set up time and the increased movability helps you to operate your machine also in urban areas or family's backyard.

Double Cylinder Drive (patented)

TERRA has revolutionized the drilling and backreaming process with its innovative double cylinder drive, providing a powerful 6 tons of force in both directions. Its swift quick gear enables maximum speed for extraordinary results – reaching up to 33 m/min. This new system is efficient and reliable without any losses.

Oscillating Drill Ramp

TERRA has developed a new swinging drill ramp for the DJ 13. It has two rotation points with two cylinders. With this unique system, the drill ramp can move from 18° up to 40° (10° - 22°). The rubber crawler stays on the ground up to 36° for a good stability.

Your advantages of the TERRA-JET DJ 13



Double cylinder drive (patented):
Direct ram, 100 % power at the drill rod



Cruise control:
Drilling by a push of a button



ADBS:
Automatic drilling and backreaming system



Carve mode:
Easy steering also in hard ground conditions



Thrust control:
Automatic adjustment of pullback force



Connection for Pit Launch Machine:
Pit Launch Machine uses hydraulics of the HDD drill



Max. pulling force: 4 t
Max. torque: 1'800 Nm
Max. rotation speed: 200 U/min
HATZ (Euro Stage 5), 55 kW (75 HP)
Max. drilling volume: 95 l/min
Drills up to: 100 m / Ø 260 mm
Drill rods on board: 90 m



Compact design with powerful inside

The TERRA-JET DJ 10 delivers impressive power, boasting up to 4.2 tons of thrust and pullback force delivered by a reliable 75 HP HATZ Diesel engine (Euro stage 5). An incredible 1.800 Nm torque is achieved at an efficient maximum spindle speed of 200 rpm. What really sets the DJ 10 apart from other models are its small footprint and reduced noise level for user comfort which can be set up quickly no matter where you're located - even in tight urban areas or your own backyard.

Operator's platform

The console is well-organized and has plenty of room to operate. Drilling can be performed easily using the ergonomically designed joystick, while an intuitive instrument panel provides simple control at your fingertips.

Intelligent drilling assistant systems

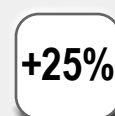
The Intelligent Drilling Assistant systems, like Thrust Mode, Carve Mode and Drill Speed Control ensures an efficient and stress-free drilling process. The advanced CLP Control System enables all drilling assistant systems to gain an understanding of their underground environment, ensuring peak productivity and performance.



High quality drill rods

The TERRA-JET DJ 10 has drill rods that are 2 m long and a bending radius of 30 m, allowing you to easily manoeuvre around existing pipes while drilling. With its 90 m magazine capacity, less rod changing is required which ultimately increases efficiency in operation time.

Your advantages of the TERRA-JET DJ 10



Powerful engine:
25 % more power at the drilling tools



Double cylinder drive (patented):
Direct ram, 100 % power at the drill rod



Extremely high entry angle:
Entry angle up to 67 ° (34°)



Service friendly design:
No electronics, easy service



ADBS:
Automatic drilling and backreaming system



Connection for Pit Launch Machine:
Pit Launch Machine uses hydraulics of the HDD drill



Compact Design

The mixing stations of TERRA have a very compact design. They can be installed easily on a truck without taking too much space. The mixing station can be lifted with a fork lift or with a crane or excavator at the four lifting eyes.

Mixing Stations

Mixing and Pumping

Mixing stations

The fluid mixing stations of TERRA were designed to provide highest performance and efficiency at low costs.

Powered by strong mixing pumps the mixing stations offer high capacity. Several tanks can be combined at the same time.



MS 700 with
2x 2'000 l tank

Part Number	Description	Tank [l]	Mixing Capacity [l/min]	Models
1964.6002.00	Mixing station MS 700	2'000	700	DJ 10 / DJ 13 / DJ 20
1964.6013.00	Mixing station MS 700	3'000	700	DJ 10 / DJ 13 / DJ 20
1968.6001.00	Mixing station MS 1400e	2'000	1400	DJ 10 / DJ 13 / DJ 20
1961.6004.00	Mixing station MS 1200	4'000	1200	DJ 23 / DJ 40
1968.6000.00	Mixing station MS 1400e	4'000	1400	DJ 23 / DJ 40
1964.6103.00	Secondary tank	2'000		
1964.6105.00	Secondary tank	3'000		
1961.6103.00	Secondary tank	4'000		

Accessories mixing and pumping

TERRA offers additional accessories for your mixing and pumping station.

Part Number	Description
1931.8200.00	Submersible pump for Bentonite
1964.8512.00	Mobile High Pressure Cleaner 300-10
1900.8510.01	High pressure cleaning gun Ø 3
1900.8512.00	High pressure hose Ø 13/15 m
1900.8514.00	High pressure hose Ø 13/30 m
1964.6201.00	Fire brigade hose Ø 52/20 m/KA66
1964.6203.00	Fire brigade hose Ø 52/30 m/KA66
1968.6201.00	Fire brigade hose Ø 76/20 m/KA89
1968.6203.00	Fire brigade hose Ø 76/30 m/KA89



Submersible
pump for Bentonite



Fire brigade hose



Hot-dip galvanised magazines with reloading function

All TERRA-JETs are equipped with exchangeable, hot-dip galvanised magazines. With the reloading function, additional drill rods can be quickly and easily reloaded from the side.

HDD Drill Rods, Rod wiper

Drill Rods

HDD Drill Rods

Friction welded HDD drill rods consist of a drill pipe and of joints from high quality CrMo steel. Both friction welds have a high life span. Welding technology and steel quality allow a small bending radius of the drill rod.



HDD drill rod

Part Number	Description	Ø d ₁ [mm]	Ø d ₂ [mm]	Length [m]	Bending Radius [m]	Models
1965.5602.00	Drill rod ø 48-42 / 2.0 m / F120	42	48	2.0	30	DJ 10
1966.5601.00	Drill rod ø 57-52 / 2.0 m / F140	52	57	2.0	28	DJ 13
1964.5602.00	Drill rod ø 57-52 / 3.05 m / F140	52	57	3.05	34	DJ 20 / 23
1968.5602.00	Drill rod ø 79-67 / 4.57 m / F170	67	79	4.57	44	DJ 40
1971.5600.00	Drill rod ø 92-89 / 4.57 m / F180	92	89	4.67	60	DJ 66e

Ø d₁ = diameter rod,
Ø d₂ = diameter coupling

HDD Dual Rods

The dual rods from TERRA consist of an outer rod and an inner shaft. The inner shaft is centred and guided via a hexagon.



Dual rod

Part Number	Description	Ø d ₁ [mm]	Ø d ₂ [mm]	Length [m]	Bending Radius [m]	Models
1962.5605.00	Dual rod ø 82-76 / 2.85m / 2.77 DS	76	82	2.85	35	DJ 23 AT
1969.5600.00	Dual rod ø 95-78 / 4.57 m / 2.95DS	78	95	4.57	52	DJ 40 AT

Rod Wiper

The rod wiper keeps your drill rods clean. The drilling fluid is collected in the bentonite collecting pond of the TERRA-JET.

Part Number	Description	Drill Rod [mm]
1961.5920.00	Rod wiper DJ 10 (split)	ø 50/42
1900.4664.00	Rod wiper DJ 10 (open)	ø 50/42
1961.5922.00	Rod wiper DJ 13+20+23 (split)	ø 60/54
1900.4665.00	Rod wiper DJ 13+20+23 (open)	ø 60/54
1961.5928.00	Rod wiper DJ 23 AT (split)	ø 82/67
1961.5926.00	Rod wiper DJ 40 (split)	ø 79/67
1900.4669.00	Rod wiper DJ 40 (open)	ø 79/67
1961.5930.00	Rod wiper DJ 40 AT (split)	ø 95/78



Rod wiper
(open)

Sonde Housing (side loader)

The sonde housing is designed as a side loader. The sonde can be positioned in any rolling position. It is very easy to assemble and disassemble the sonde from the sonde housing.

Part Number	Description	Models
1966.5100.00	Sonde housing 70	DJ 10 / 13
1932.5100.00	Sonde housing 76	DJ 20 / 23
1968.5100.00	Sonde housing 89	DJ 40

3 Finger Head with Pulling Eye

The 3 finger head is ideal for hard ground conditions. With the pulling eye smaller pipes can be pulled in immediately after the pilot bore. This saves time and money.

Part Number	Description	Ø d ₁ [mm]	Models
1966.5120.00	3 finger head	102	DJ 10 / 13
1932.5120.00	3 finger head	125	DJ 20 / 23
1968.5120.00	3 finger head	152	DJ 40
1932.5122.00	Pulling eye for 3 finger head		DJ 10 - 23
1968.5122.00	Pulling eye for 3 finger head		DJ 40
1966.5121.00	TCI teeth for 3 finger head		DJ 10 / 13
1932.5121.00	TCI teeth for 3 finger head		DJ 20 / 23
1968.5121.00	TCI teeth for 3 finger head		DJ 40

Changeable Steering Plates

The changeable steering plates are ideal for soft ground conditions such as clay or sand. The plates are secured with several screws to the blade adapter.

Part Number	Description	Ø d ₁ [mm]	Models
1966.5130.00	Blade adapter 70		DJ 10 / 13
1966.5135.00	Steering plate R/89	89	DJ 10 / 13
1966.5136.00	Steering plate P/89	89	DJ 10 / 13
1966.5137.00	Steering plate STP/89	89	DJ 10 / 13
1966.5138.00	Steering plate M/89	89	DJ 10 / 13
1932.5130.00	Blade adapter 76		DJ 20 / 23
1932.5135.00	Steering plate R/102	102	DJ 20 / 23
1932.5136.00	Steering plate P/102	102	DJ 20 / 23
1932.5137.00	Steering plate STP/102	102	DJ 20 / 23
1932.5138.00	Steering plate M/102	102	DJ 20 / 23
1968.5130.00	Blade adapter 89		DJ 40
1968.5135.00	Steering plate R/127	127	DJ 40
1968.5136.00	Steering plate P/127	127	DJ 40
1968.5137.00	Steering plate STP/127	127	DJ 40
1968.5138.00	Steering plate M/127	127	DJ 40

Ø d₁ = Drilling diameter



Sonde housing



3 Finger Head



Blade adapter



Steering plate STP



Steering plate P

Steering plate STP

The steering plate STP is equipped with small hard metal teeth. This plate is ideal for compact ground conditions and long, straight bores.

Steering plate P

The steering plate P has an aggressive, wide steering area with several hard metal teeth. This plate is ideal for soft ground conditions.

Steering plate R

The steering plate P has a wide steering area. The plate is equipped with a tungsten carbide application for soft and sandy ground conditions.

Steering plate M

The M stands for 'Monster'. This aggressive drilling head makes drilling in hard ground conditions possible.

Starter Rod

The starter rod is connected in between the first drill rod and the crossover of the sonde housing or reamer. An optional check valve prevents the drilling fluid to flow backwards into the drill rod.

Part Number	Description	Models
1966.5412.00	Starter rod F120/RM13T	DJ 10
1966.5419.00	Starter rod F140/RM13T	DJ 13
1932.5412.00	Starter rod F140/RM14T	DJ 20 / 23
1962.5412.00	Starter rod DS2.77/RM14T	DJ 23 AT
1968.5412.00	Starter rod F170/RM16T	DJ 40

Hex Collar (Sleeve)

When assembled, the hex collar transfers the torque and it prevents, that the thread between the reamer and the drill rod is tightened together. The hex collar has several hard metal teeth. It is hold in position with two screws. For disassembly both screws are driven out, then the hex collar may be moved backwards. Then you can unscrew the drill head or the reamer manually without any tools.

Part Number	Description	Models
1966.5415.01	Hex Collar RM13T	DJ 10 / 13
1932.5415.01	Hex Collar RM14T	DJ 20 / 23
1968.5415.01	Hex Collar RM16T	DJ 40



Steering plate R



Steering plate M



Starter rod with check valve



Sleeve with teeth



First-class rock drilling tools

TERRA's rock drilling tools are characterised by their outstanding quality and durability, working reliably even under the most demanding conditions. They are specially designed to ensure high efficiency and precision when drilling through hard rock formations.

Rock Drilling Tools DJ 23 AT / DJ 40 AT

Drilling Tools

Rockmaster

The Rockmaster is the ideal tool for pilot drilling in rock formations. It is equipped with a 2° bend and ensures precise and efficient drilling, even under the most difficult conditions.

Part Number	Description	Models
1962.5000.00	Rockmaster DJ 23 AT	DJ 23 AT
1969.5000.00	Rockmaster DJ 40 AT	DJ 40 AT



Rockmaster

Roller Chisel

The roller chisel is used for hard or abrasive floors. It continuously breaks down the rock and also enables drilling in hard rock formations.

Part Number	Description	Models
1962.5021.00	Roller chisel 143 mm	DJ 23 AT
1962.5020.00	Roller chisel 160 mm	DJ 23 AT
1969.5020.00	Roller chisel 165 mm	DJ 40 AT
1969.5000.00	Nozzle ø 6 mm, für RM 165	



Roller chisel

PDC - Chisel

PDC chisels are used in soft rock. The PDC chisels are equipped with carbide pins that continuously break down the rock.

Part Number	Description	Models
1962.5022.00	PDC-Meissel 143 mm	DJ 23 AT
1969.5022.00	PDC-Meissel 165 mm	DJ 40 AT
1969.5023.04	Nozzle 4 mm, für PDC 165	



PDC - chisel

Hole Openers

Hole openers can also be used instead of expanding core bits for the expansion process on rocky ground. The roller bits continuously break down even hard rock with high compressive strength. Hole openers are available in various sizes on request.



Hole opener



High Quality Reamers for your Drilling Success

TERRA offers a wide range of high-quality reamers. Depending on the ground conditions, you can choose between reamers for soft ground like sand or clay but also reamers for hard ground like gravel or rock. TERRA also offers push-reamers for the intermediate backreaming procedure.

Reamers Allrounder and Rock

Reamers

Reamer ALLROUNDER

The ALLROUNDER is equipped with several carbide inserts. It is the ideal reamer for all ground conditions.

- with several carbide inserts
- ideal for pit launch machine MINI-JET
- with integrated swivel



Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1930.5246.00	Reamer ALLROUNDER 090	Ø 90	< 75	API-36	7
1930.5248.00	Reamer ALLROUNDER 115	Ø 115	< 90	API-36	7
1930.5249.00	Reamer ALLROUNDER 140	Ø 140	< 110	API-36	7
1930.5250.00	Reamer ALLROUNDER 160	Ø 160	< 125	API-36	7
1930.5255.00	Reamer ALLROUNDER 215	Ø 215	< 180	API-44	15
1930.5257.00	Reamer ALLROUNDER 260	Ø 260	< 200	API-44	15
1930.5258.00	Reamer ALLROUNDER 300	Ø 300	< 250	API-44	15
1900.5542.00	Swivel 7 t			Pulling eyes	
1961.5940.00	Swivel 7 t			2" IF pin	
1961.5942.00	Swivel 15 t			2-3/8" reg pin	

Reamer ROCK

The reamer ROCK is equipped with several conical hard metal teeth. The reamer is ideal for hard ground conditions such as rock of medium strength.

- for rocky ground conditions (medium strength)
- ideal for TERRA MINI-JET



Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1961.5810.01	Reamer ROCK 135	Ø 135	< 110	API-44	7
1961.5814.02	Reamer ROCK 160	Ø 160	< 140	API 2"	7
1961.5818.02	Reamer ROCK 215	Ø 215	< 180	API 2-3/8"	15
1945.5257.00	Reamer ROCK 260	Ø 260	< 225	API-55	1960.5540.00
1961.5824.00	Reamer ROCK 300	Ø 300	< 250	API 2-3/8"	15
1945.5259.01	Reamer ROCK 360	Ø 360	< 280	API 2-3/8"	15
1944.5261.00	Reamer ROCK 420	Ø 420	< 315	API-55	1960.5540.00
1961.5828.00	Reamer ROCK 460	Ø 460	< 400	API-55	1960.5540.00
1944.5263.00	Reamer ROCK 520	Ø 520	< 450	API-55	1960.5540.00
1944.5265.00	Reamer ROCK 650	Ø 650	< 500	API-55	1960.5540.00
1944.5267.00	Reamer ROCK 800	Ø 800	< 630	API-55	1960.5540.00
1944.5269.00	Reamer ROCK 1000	Ø 1000	< 800	API-55	1960.5540.00
1960.5540.00	Swivel 15 t, with stop				
1945.5257.30	Box spanner 55/190, for the assembly of the swivel 240-460				

Reamer Fluted and Kodiak

Reamers

Reamer FLUTED

The FLUTED reamer is a universal reamer. You can use it in mixed ground conditions. The teeth cut the ground continuously. The longitudinal grooves allow to move the material backwards.

- with several hard metal teeth
- ideal for mixed ground condition
- with integrated swivel



Reamer
FLUTED

Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1968.5014.01	Reamer FLUTED 220 (150)	Ø 220	< 180	API 2-3/8"	6
1968.5018.00	Reamer FLUTED 270 (203)	Ø 270	< 225	API 2-3/8"	10
1968.5022.00	Reamer FLUTED 300 (254)	Ø 300	< 250	API 2-3/8"	10
1968.5026.00	Reamer FLUTED 340 (305)	Ø 340	< 280	API 2-3/8"	20
1968.5030.00	Reamer FLUTED 355	Ø 355	< 280	API 2-3/8"	20
1968.5034.00	Reamer FLUTED 406	Ø 406	< 315	API 2-7/8"	20
1968.5038.00	Reamer FLUTED 457	Ø 457	< 355	API 2-7/8"	20
1968.5042.00	Reamer FLUTED 508	Ø 508	< 400	API 2-7/8"	20
1968.5044.00	Reamer FLUTED 600	Ø 600	< 500	API 2-7/8"	30
1968.5046.00	Reamer FLUTED 700	Ø 700	< 630	API 2-7/8"	30

Reamer KODIAK

The reamer KODIAK is a fluted reamer with long hard metal teeth. The reamer is ideal for mixed ground conditions with soft and middle strength.

- with longitudinal hard metal teeth
- ideal for soft and middle strength mixed ground
- with integrated swivel



Reamer
KODIAK

Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1961.5010.00	Reamer KODIAK 140 (114)	Ø 140	< 110	API 2"	9
1961.5014.00	Reamer KODIAK 185 (165)	Ø 185	< 140	API 2"	9
1961.5018.00	Reamer KODIAK 230 (203)	Ø 230	< 180	API 2-3/8"	15
1961.5022.01	Reamer KODIAK 254	Ø 254	< 200	API 2-3/8"	25
1961.5026.00	Reamer KODIAK 305	Ø 305	< 250	API 2-3/8"	25
1961.5030.00	Reamer KODIAK 355	Ø 355	< 280	API 2-3/8"	35
1961.5034.00	Reamer KODIAK 406	Ø 406	< 315	API 2-7/8"	35
1961.5038.00	Reamer KODIAK 457	Ø 457	< 355	API 2-7/8"	35
1961.5042.00	Reamer KODIAK 508	Ø 508	< 400	API 2-7/8"	35
1961.5046.00	Reamer KODIAK 559	Ø 559	< 450	API 3-1/2"	45
1961.5050.00	Reamer KODIAK 610	Ø 610	< 500	API 3-1/2"	45
1961.5054.00	Reamer KODIAK 660	Ø 660	< 560	API 3-1/2"	45
1961.5058.00	Reamer KODIAK 711	Ø 711	< 600	API 3-1/2"	45
1961.5062.00	Reamer KODIAK 762	Ø 762	< 630	API 3-1/2"	45
1961.5064.00	Reamer KODIAK 812	Ø 812	< 710	API 3-1/2"	45
1961.5912.00	Swivel with flansh, 15 t			Pulling eyes	
1961.5916.00	Swivel with flansh, 25 t			Pulling eyes	
1961.5918.00	Swivel with flansh, 35 t			Pulling eyes	

Reamer Flycutter and Mixer

Reamers

Reamer FLYCUTTER

The FLYCUTTER reams compact ground and soft rock (sand, sandstone, compacted sediments). The reamer is often used as a prereamer. Pulling eye and swivel have to be installed separately.

- for compacted ground and soft rock
- sand, sandstone, compacted sediments



Räumer
FLYCUTTER

Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1968.5210.00	Reamer FLYCUTTER 152	Ø 152	< 125	API-2"	6
1968.5214.00	Reamer FLYCUTTER 203	Ø 203	< 180	API-2-3/8"	10
1961.5222.00	Reamer FLYCUTTER 254	Ø 254	< 200	API-2-3/8"	1961.5942.00
1961.5226.00	Reamer FLYCUTTER 305	Ø 305	< 250	API-2-3/8"	1961.5942.00
1961.5230.00	Reamer FLYCUTTER 355	Ø 355	< 280	API-2-3/8"	1961.5942.00
1961.5234.00	Reamer FLYCUTTER 405	Ø 405	< 315	API-2-7/8"	1961.5944.00
1961.5238.00	Reamer FLYCUTTER 455	Ø 455	< 355	API-2-7/8"	1961.5944.00
1961.5242.00	Reamer FLYCUTTER 508	Ø 508	< 400	API-2-7/8"	1961.5944.00
1961.5250.00	Reamer FLYCUTTER 610	Ø 610	< 500	API-2-7/8"	1961.5944.00
1961.5258.00	Reamer FLYCUTTER 710	Ø 710	< 630	API-2-7/8"	1961.5944.00
1961.5262.00	Reamer FLYCUTTER 762	Ø 762	< 630	API-2-7/8"	1961.5944.00
1961.5264.00	Reamer FLYCUTTER 810	Ø 810	< 710	API-2-7/8"	1961.5944.00
1961.5940.00	Swivel 7 t			2" IF pin	
1961.5942.00	Swivel 15 t			2-3/8" reg pin	
1961.5944.00	Swivel 25 t			2-7/8" reg pin	

Reamer MIXER

The MIXER is the ideal reamer for clay and tough ground conditions. Due to his aggressive cutting characteristics it reams its way through the ground.

- for clay and tough ground
- aggressive cutting characteristics



Reamer
MIXER

Part Number	Description	Backreaming-Ø [mm]	for PE Pipes [mm]	Thread	Swivel [t]
1961.5314.00	Reamer MIXER 152	Ø 152	< 125	API-2"	1961.5940.00
1961.5318.00	Reamer MIXER 203	Ø 203	< 180	API-2-3/8"	1961.5942.00
1961.5322.00	Reamer MIXER 254	Ø 254	< 200	API-2-3/8"	1961.5942.00
1961.5326.00	Reamer MIXER 305	Ø 305	< 250	API-2-3/8"	1961.5942.00
1961.5330.00	Reamer MIXER 355	Ø 355	< 280	API-2-3/8"	1961.5942.00
on request	Reamer MIXER 405	Ø 405	< 315		
on request	Reamer MIXER 455	Ø 455	< 355		
on request	Reamer MIXER 508	Ø 508	< 400		
on request	Reamer MIXER 610	Ø 610	< 450		
on request	Reamer MIXER 660	Ø 660	< 500		
1961.5940.00	Swivel 7 t			2" IF pin	
1961.5942.00	Swivel 15 t			2-3/8" reg pin	



Pulling eyes

The pulling eye allows to connect new drill rods during the intermediate backreaming.

Part Number	Description
1965.5610.00	Pulling eye F120 pin
1965.5611.00	Pulling eye F120 box
1964.5610.00	Pulling eye F140 pin
1964.5611.00	Pulling eye F140 box
1968.5430.00	Pulling eye F170 pin
1968.5431.00	Pulling eye F170 box



Pulling eyes pin

Quick Connect

The Quick Connect allows a fast and secure connection between the drill rods and the drilling tools of HDD drilling machines. They consist of a crossover for the sonde housing, a crossover for the reamers, a starter rod and a hex collar (sleeve).



Pulling eye box

Crossover

The crossover is connected in between the starter rod and the reamer or sonde housing. TERRA offers several crossovers depending on the threads of the reamer.

Part Number	Description	Models
1930.5676.00	Crossover API-36 pin/F120 pin	
1930.5678.10	Crossover API-44 pin/F120 pin	
1932.5674.00	Crossover API-55 pin/F140 box	
1932.5674.10	Crossover 2-3/8" reg pin/F140 box	
1966.5423.02	Crossover API-36 pin/RM13T pin	DJ 10
1966.5424.02	Crossover API-44 pin/RM13T pin	DJ 10
1966.5425.02	Crossover API-55 pin/RM13T pin	DJ 10
1966.5420.02	Crossover 2" IF pin/RM13T pin	DJ 10
1966.5421.02	Crossover 2-3/8" reg pin/RM13T pin	DJ 10
1932.5423.02	Crossover API-36 pin/RM14T pin	DJ 13 / 20 / 23
1932.5424.02	Crossover API-44 pin/RM14T pin	DJ 13 / 20 / 23
1932.5425.02	Crossover API-55 pin/RM14T pin	DJ 13 / 20 / 23
1932.5420.02	Crossover 2" IF pin/RM14T pin	DJ 13 / 20 / 23
1932.5421.02	Crossover 2-3/8" reg pin/RM14T pin	DJ 13 / 20 / 23
1932.5422.02	Crossover 2-7/8" reg pin/RM14T pin	DJ 13 / 20 / 23
1968.5424.02	Crossover API-44 pin/RM16T pin	DJ 40
1968.5425.02	Crossover API-55 pin/RM16T pin	DJ 40
1968.5420.02	Crossover 2" IF pin/RM16T pin	DJ 40
1968.5421.02	Crossover 2-3/8" IF pin/RM16T pin	DJ 40
1968.5422.02	Crossover 2-7/8" IF pin/RM16T pin	DJ 40
1968.5423.02	Crossover 3-1/2" IF pin/RM16T pin	DJ 40
1969.5420.00	Crossover 2.77DS box/2.95DS pin	DJ 40 AT
1969.5421.00	Crossover 3.25SS box/2.95DS pin	DJ 40 AT



Crossover pin x box



Crossover



First Class Pulling Accessories

TERRA offers various pulling accessories such as towing heads or cable socks. Integrated pulling eyes in the drill head allow immediate pipe pulling.

Cable Pulling Socks and Towing Heads

Pulling Accessories

Cable Pulling Socks, Shackles and Chain Locks

For smaller pipe diameters, TERRA offers cable socks. They are connected to the reamer with chain locks or shackles.

Part Number	Description	for PE Pipes DA [mm]	Pulling force [t]
1900.5503.08	Cable pulling sock DA 15-20	15-20	
1900.5503.10	Cable pulling sock DA 20-25	20-25	
1900.5503.20	Cable pulling sock DA 25-30	25-30	
1900.5504.00	Cable pulling sock DA 30-40	30-40	
auf Anfrage	Cable pulling sock DA 110 mm		
1960.7004.00	Shackle 3200		3.2
1960.7005.00	Shackle 4750		4.8
1944.5549.00	Shackle 8500		8.5
1960.7002.00	Shackle 12000		12.0
1900.5360.00	Chain lock 10		12.5
1900.5362.00	Chain lock 13		20.0
1900.5366.00	Pulling chain Ø 10 mm, 0.3 m		6.4



Chain lock
12.5 t



Cable pulling
sock 4.75 t

Towing Heads

Part Number	Description	for PE Pipes DA [mm]	Pulling force [t]
1965.5501.00	Towing Head 032	32	0.6
1965.5503.00	Towing Head 040	40	1.0
1965.5505.00	Towing Head 050	50	1.6
1965.5507.00	Towing Head 063	63	11
1965.5509.00	Towing Head 075	75	11
1965.5511.00	Towing Head 090	90	11
1965.5513.00	Towing Head 110	110	25
1965.5515.00	Towing Head 125	125	25
1900.5523.00	Towing Head 132	132	25
1965.5517.00	Towing Head140	140	25
1965.5519.00	Towing Head 160	160	25
1965.5521.00	Towing Head 180	180	25
1965.5523.00	Towing Head 200	200	25
1965.5525.00	Towing Head 225	225	25
1965.5527.00	Towing Head 250	250	25
1965.5529.00	Towing Head280	280	25
1965.5531.10	Weld-on towing heads PE 315	315	16
1965.5533.10	Weld-on towing heads PE 355	355	16
1965.5535.10	Weld-on towing heads PE 400	400	16
1965.5537.10	Weld-on towing heads PE 450	450	24
1965.5539.10	Weld-on towing heads PE 500	500	24
1965.5541.10	Weld-on towing heads PE 560	560	24
1965.5543.10	Weld-on towing heads PE 630	630	32



Shackle
4.75 t



Towing Head 110



Weld-on towing head PE



Locating Systems and Sondes

Locating Accessories

DCI-Locating Systems

TERRA is an official dealer of DCI. The Falcon locating system is one of the most modern locating systems for HDD machines. It is equipped with a remote display, a receiver and a battery charger.

Part Number	Description
1961.7131.00	Falcon F1 + FCD
1961.7132.00	Falcon F1 + AF8
1961.7150.00	Falcon F2 + FCD
1961.7151.00	Falcon F2 + AF8
1961.7160.00	Falcon F5 + FCD
1961.7161.00	Falcon F5 + AF8



Sonde and Long life Battery

The sonde allows the locating of your drill head. It works with a wide range of frequencies from 4,5 kHz up to 45 kHz. It scans for active interference. With the long life battery you can work up to 120 h.

Part Number	Description	Length [mm]	Frequency [kHz]	Locating depth [m]
1961.7138.00	F1	381	9.5-13	15
1961.7137.00	F1	203	9.5-13	7
1961.7154.00	F2+/F5+	381	4.5-45	30
1961.7153.00	F2+/F5+	203	4.5-45	7
1961.7164.00	F5+, Pressure	381	4.5-45	30
1961.7166.00	F5+, Pressure	482	4.5-45	38
1961.7165.00	F5+, Rebar	381	0.3-0.7	30
1961.7163.00	F5+, Rebar	203	0.3-0.7	7
1900.7183.00	Long life battery, for sonde L = 380			
1961.7136.00	Battery for Falcon F1 sonde, CR123A			
1932.4553.00	Adapter cable cigare (pin) / 4pol (box)			
1961.7145.00	Yagi Antenna, for Falcon F1, F2, F5			



Zip Level Pro-2000

The Zip Level allows the level measurement up to 12 m in a circel of 60 m.

Part Number	Description
1921.6040.00	Zip Level Pro-2000



Complete Service for Trenchless Technology

TERRA - Always One Drill Ahead



Technicians on site

Our experienced technicians provide professional on-site support. Our service is provided directly from the manufacturer's factory at standard regional conditions or by qualified authorized dealers. You have direct access to the TERRA service hotline, where we connect you to our service team. A service package is offered with every machine to ensure a long lifetime of your machine. You have very low follow-up costs or repair costs. Swiss Made Quality requirements instead of expensive repair costs - that is our claim for Trenchless Technology.



Long-term spare parts service - High investment protection

We keep a huge stock of spare parts. Through intelligent digital control, essential spare parts are immediately available. We keep spare parts even 20 years after delivery of your machine. Within Europe we deliver spare parts within 24 hours. Lean logistics and a fast process organization make this possible. With every machine delivered, you receive spare parts catalogs and operating manuals. If service is required, our team of experts can help you quickly and competently.



Service hotline

Our service hotline connects you directly to the service department with a technician. Thanks to good documentation, we can quickly help you with your service problem. Even with machines that have been in use for a very long time, good documentation ensures that we can continue to help you even years later. This offers you a high level of investment protection.



Fleet management (telematics)

TERRA offers fleet management for all HDD machines. This allows you to keep track of your TERRA machine. With the telematics, all machine data is transferred to a cloud, which can be viewed on your tablet or mobile phone. Thanks to this intelligent solution, you can intervene quickly in the event of an emergency. The data is directly connected to our service department, where experts can help you quickly and reliably.



Training with TERRA certificate

Our experienced staff offers training for your crews available on the jobsite or in the classroom. With our insider knowledge we make you run your drill like no one else. Your crew will be faster, more productive and more efficient on the jobsite. After the successful training you will receive a TERRA certificate which allows you to operate the machine on its best.



Theory and practice

Well-trained operators are an important cornerstone for successful deployment. The comprehensive theoretical training in the training room includes topics on process engineering, machine technology and how to handle your newly acquired machine. Your crew will be made familiar on request at the site. Well-trained staff pays off for your investments in machines.



Lucrative financing offers

TERRA offers lucrative financing offers for new and used machines. Whether you want an operate lease, finance lease or installment plan - talk to our experts about the best solution for you. Even repurchases of existing equipment can be discussed individually.

More TERRA Products

The World of Trenchless Technology

Piercing Tools

TERRA-HAMMER Serie T / TU



Thrust Boring Machines

TERRA-JACK



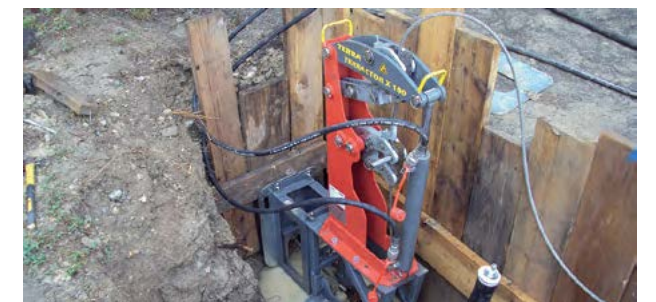
Rod Bursters

TERRA-HYDROCRACK



Cable Bursters

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There for you 24 hours, 365 days – so you don't waste any time on your construction site.

TERRA - always one drill ahead!



HIGH-QUALITY TOOLS

Drilling tools are a matter of trust. Different ground conditions require a wide range of drilling heads and reamers.



DCI-LOCATION SYSTEM

TERRA is an official dealer of DCI. With the new Falcon system you can even locate in areas with high interferences.



MIXING STATIONS

The mixing stations from TERRA enable mixing of the bentonite. They are quiet, efficient and have a high mixing capacity.



CUSTOMER SERVICE

Satisfied clients worldwide and a great customer service are the result of our constant progress. The TERRA-JET Directional Drill is a must have for every contractor!