



LICHER

FUTURE-FOCUSED EQUIPMENT

HDD-E SERIES

Fully Electric Driven Horizontal Drilling Rigs



- Quiet
- Eco-friendly
- Safe
- Powerful
- Future-focused

www.streicher-ecotec.de



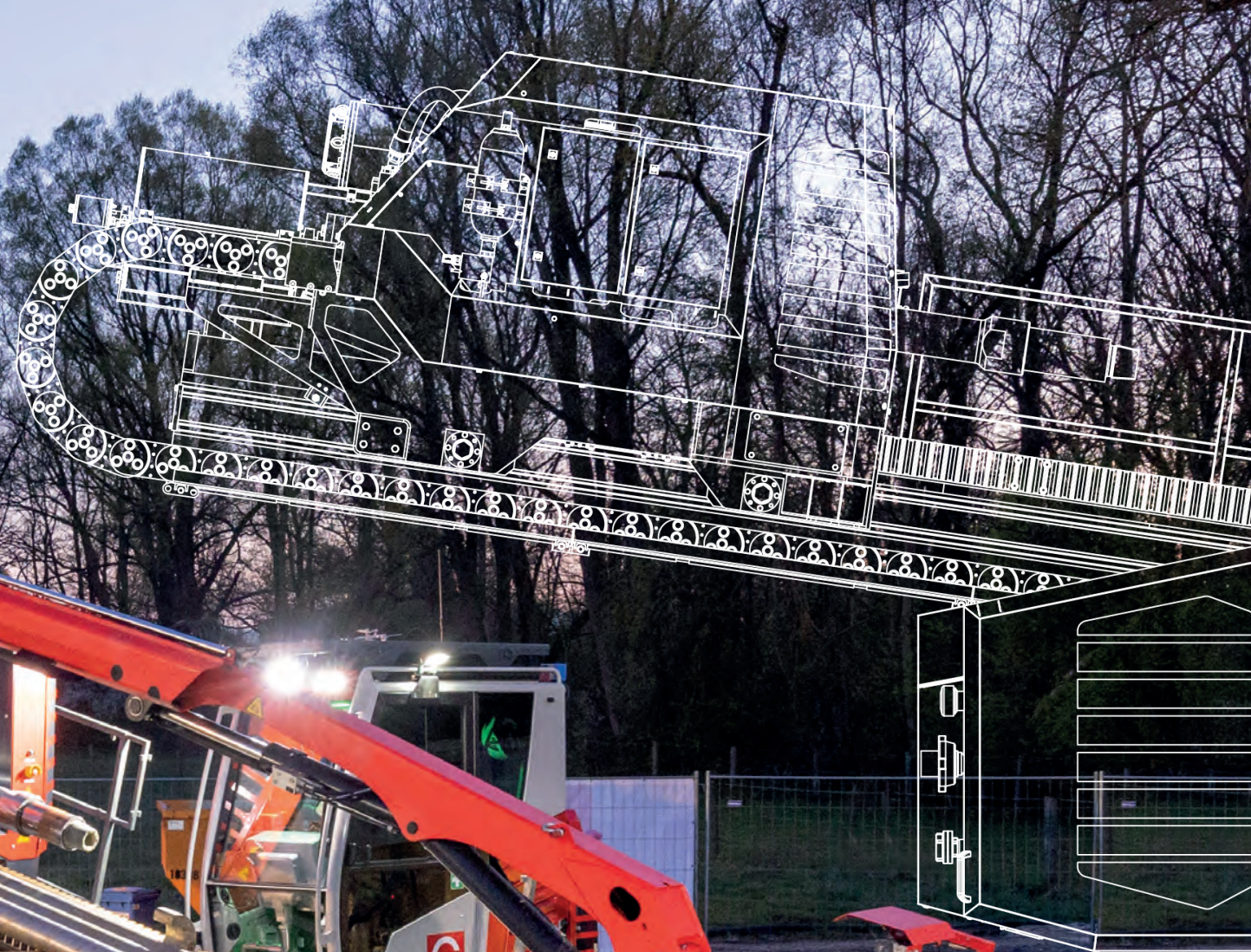
STREICHER ECOTEC PRODUCTS – PROVEN IN PRACTICE AND FUTURE-FOCUSED

A real alternative to conventionally operated drilling rigs – these are the ecotec products from STREICHER.

Horizontal drilling rigs are used for trenchless laying of conduits and cables. STREICHER has completely re-designed the previous diesel-hydraulic rigs as part of an internal joint project. The result are rigs that build on previous practical experience with HDD rigs and, at the same time, are trend-setting in terms of electrical drive, structure and quality!

The rigs impress with :

- safety
- environment friendly technology
- sustainability
- cost-efficiency

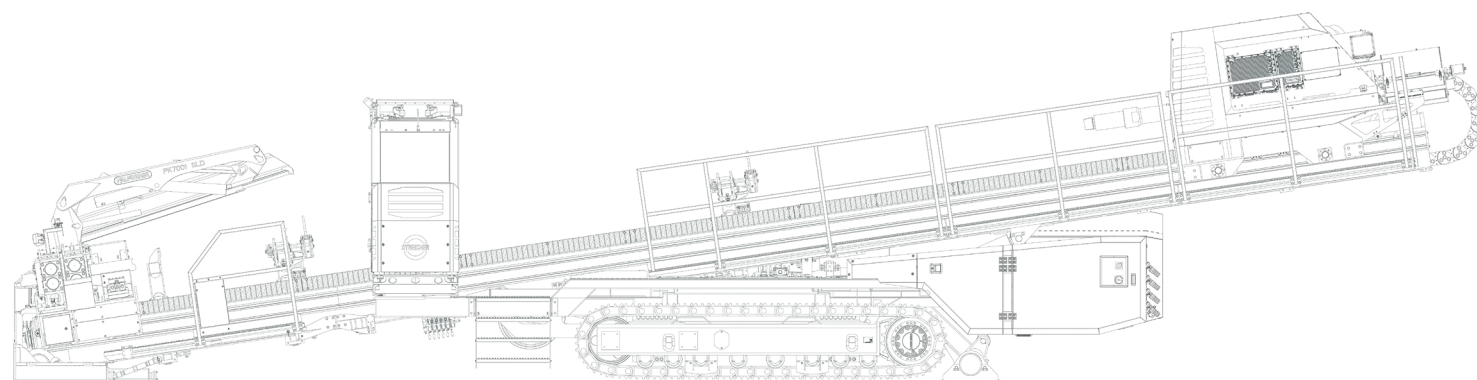


OVERVIEW OF HDD-E SERIES

Renewable energies are becoming more and more important. This saves CO₂ emissions and protects the environment. Following technology trends the entire drive system of the HDD-E rigs was designed to be fully electric. Compared to conventional rigs, these rigs also impress with their significantly higher efficiency rate.

In addition, the new HDD-E rigs combine numerous advantages in many areas:

- The fully electric drive system is able to **temporarily store excess energy**, which can be accessed flexibly when required. This optimises energy consumption.
- **Emission protection** was a key driver when planning the rigs. By means of the electrical drive technology, the rigs are very quiet, which, in addition to a high level of acceptance in residential and natural conservation areas, also has advantages for occupational safety and for the employees.
- The new technology not only significantly reduces noise but also **CO₂-emissions**. The reduction in CO₂ is becoming more and more important at invitations to tender.



- The HDD-E rigs offer the option of being **supplied via the public power grid**. In addition, the drilling rigs can be moved without external energy sources.
- They also impress with their **cost efficiency**. In addition to saving energy consumption, operating costs can be reduced significantly. Due to the fully electrical design of the HDD-E rigs, maintenance costs are also reduced to a minimum.
- The operation of the HDD-E rigs is made considerably easier by an **intuitive operating concept**. The large touch panel gives the operator a good overview of the drilling process and the most important drilling parameters.
- In terms of **safety**, the rigs are convincing by their integrated anti-collision system, among other items. The rigs can be relocated and installed using the remote control. For the operator, this means an optimal field of vision and therefore a reduction in risks of accidents. This offers considerable advantages even in confined spaces.
- Moreover, the HDD-E rigs include a **boost function**. During operation higher thrust and pullback forces can be temporarily retrieved. This guarantees a higher flexibility as well as a wider range of applications.

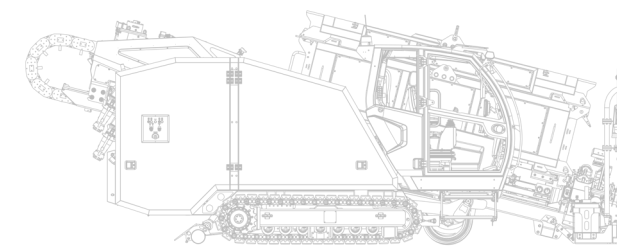
Our HDD-E rigs combine proven technology with a high degree of sustainability, efficiency and an intuitive, modern operating concept.





HDD20-E

TECHNICAL PRODUCT DATA SHEET



STREICHER HDD20-E

- Thrust load: 200 kN (20 t)
Pullback load: 200 kN (20 t); 250 kN (25 t) (boost)
- Power rating: 150 kVA (140 kW)
- Transport weight: 18.3 t
- Dimensions (LxWxH): 7.6 x 2.55 x 2.8 m
- Ambient temperature: -20 to +40°C

Mast

- Length: 7.0 m
- Travel distance: 4.2 m
- Max. drill pipe length: 3.0 m (9.8 ft)
- Mast drilling angle: 12° to 18°
- Anchor plate: heavy-duty-design with mud drain and electrically driven anchoring system

Thrust and Pullback

- Type: Rack & Pinion
- Thrust load: 200 kN (20 t); 250 kN (25 t) (Boost)
Pullback load: 200 kN (20 t)
- Min. carriage speed: 0.02 m/min
- Max. carriage speed: 52 m/min

Rotation Drive

- Max. drilling torque: 11,000 Nm
- Max. break-out torque: 14,500 Nm
- Max. rotation speed: 166 U/min
- Power rating: 119 kW
- Drive: electric motor
- Saver sub: TD82
- Drive shaft shiftable (80 mm) and lockable

Break-out unit

- Break-out torque: 18,600 Nm
- Make-up torque: 14,500 Nm
- Opening width: 130 mm
- Drill pipe support on both sides

Crawler

- Type: crawler chassis
- Drive: electric motor driven by battery
- Ground travel speed: 3.0 km/h
- Control: remote control for crawler and rig-up operation
- Rubber pads for crawler tracks

Pipe Handling

- Type: automatic pipe box system with stackable additional pipe box
- Additional pipe box
Capacity: 15 x TD82 – drill pipes with 3.0 m length
- Drill pipe exchange function: Interchanged removal of drill rods from different magazine bays possible
- Reloading function for feeding additional drill pipes to the magazine
- Drill pipe cleaning system integrated in pipe box system

Mud Pump

- Type: onboard triplex-plunger pump
- Drive: electric motor
- Power rating: 70 kW
- Max. pressure: 80 bar
- Flow rate: 400 l/min (continuously); 650 l/min (max.)

Electronic Performance Data

- Power supply: 400 V / 220 A / 3 ph, PE / 50 Hz
- Type: shock resistant mobile electronics, IP67
- Battery:
 - Integrated in DC intermediate circuit
 - Operation of all functions possible
 - Temperature management system integrated
 - Energy recovery system implemented
- Cooling: internal water circuit

Control System / Operation Panel

- Cabin: onboard
- Controls: joystick-operation and b-drive
- Display: 12"-touch-panel with key bars on both sides
- Drill assistance system
- Ergonomic comfort driver's seat with vibration damping
- Radio remote control with display for crawler, erection and anchor drilling operation
- Air conditioning and heater
- Lighting of the rig via a large number of LED headlights
- Safety: anti-collision system

Standards

- Machinery Directive 2006/42/EC
- HDD-Standard DIN EN 16228-3
- Low Voltage Directive 2014/35/EU
- EMV-Directive 2014/30/EU

Options*

Pipe Handling

- Stackable pipe box
Capacity: 15 x TD82 – drill pipes with 3.0 m length
- Drill pipe greasing unit

Control System / Operation Panel

- Camera system: two cameras with permanent display in cabin
- Data recording: drilling data can be recorded and stored for later viewing
- Two-way radio
- Customisable remote access and remote maintenance
- Radio

*further options available on demand



HDD-TRUCK

The HDD20-E is the world's first fully electric horizontal drilling rig in its performance class and sets new standards in terms of environmental compatibility, efficiency and operating comfort.

With its compact design, 20 tonnes of pulling force and fully electric direct drive, it is ideally suitable for municipal applications – especially on construction sites with short lead times or durations.

The entire HDD-truck is designed as a closed, autonomous system: The power supply for the system is provided by a generator integrated into the mixing truck. For inner-city operations, emission-free operation via the public power grid is even possible.

The boost function of the HDD20-E, which can temporarily deliver 25 tons of pulling force, and the fuel-efficient energy supply of the entire HDD-truck significantly improve energy efficiency.

Compared to conventional systems, electrification offers numerous advantages, such as reduced CO₂ and noise emissions. In addition, the integrated concept minimises wear and reduces maintenance intervals. As one of the most powerful drilling rigs in its performance class, the HDD20-E thus actively contributes to decarbonisation and resource conservation.



HDD-truck

- Consisting of drilling rig HDD20-E, trailer and truck with generator and mixing system
- Total weight: 41.8 t
- Total length: 18.75 m
- Software connection between drilling rig, generator and mixing system

HDD-mixing truck

- Truck: Scania R 500 B6x2*4NA
- Motor: DC13 – Euro 6 (368 kW)
- Fuel tank: 535 litres (diesel)
- SCR tank: useful volume 60 litres
- Technical vehicle weight: 28,000 kg
- Integrated generator system to supply the HDD-rig via power take-off (PTO)
- Generator: 3 x 400 V, 190 kVA, 1500 1/min, 50 Hz
- Generator output power:
 - Eco mode: 140 kVA
 - Power mode: 190 kVA
- Cable drum for supplying power to the drilling rig
Cable length: 20 m
- Onboard mud-mixing system with 2 x 4,000 l tank
- Mixing pump: 66 m³/h, 11 kW
- Feed pump: 42 m³/h, 15 kW
- Mixing operation possible in both tanks (not simultaneously)

- Simultaneous mixing operation and mud transfer to drilling rig possible
- Fresh water tank: 500 l
- Domestic waterworks integrated
- High-pressure cleaner with automatic 20 m-hose reel integrated
- Mixing system can be controlled via local panel or remote from drilling rig

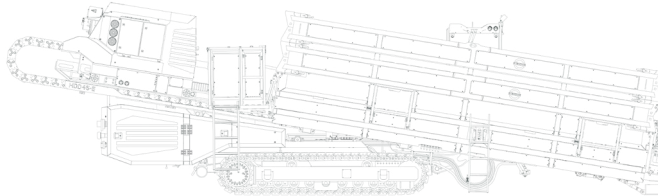
Low-bed trailer

- Type: 3-axle low-bed trailer with offset plateau
- Technical total weight: 30 t
- Axles: Air suspension axles with drum brakes 11 tons each
- Tyres: 245/70 R 17,5
- Air suspension with lifting and lowering device, automatic level control
- Total width: max. 2,550 mm
- Loading height: approx. 870 mm (loaded)
- Drawbar:
 - 40 mm DIN drawbar eye
 - Length: 1,700 mm
- 2 automatic folding supports at the rear
- 5 pairs of 4 ton lashing bars
- 7 pairs of recessed 10 ton lashing rings
- 2 foldable, 1-part loading ramps
Length: approx. 2,800 mm



HDD45-E

TECHNICAL PRODUCT DATA SHEET



STREICHER HDD45-E

- Thrust load: 450 kN (45 t)
Pullback load: 450 kN (45 t); 600 kN (60 t) (boost)
- Power rating: 250 kVA (235 kW)
- Transport weight: 28.5 t
- Dimensions (LxWxH): 11.2 x 2.55 x 3.0 m
- Ambient temperature: -20 to +40°C

Mast

- Length: 11 m
- Travel distance: 7.8 m
- Max. drill pipe length: 6.1 m (20 ft)
- Mast drilling angle: 9° – 19°
- Anchor plate: heavy-duty-design with mud drain

Thrust and Pullback

- Type: Rack & Pinion
- Thrust load: 450 kN (45 t); 600 kN (60 t) (boost)
Pullback load: 450 kN (45 t)
- Min. carriage speed: 0.02 m/min
- Max. carriage speed: 60 m/min

Rotation Drive

- Max. drilling torque: 24,000 Nm
- Max. break-out torque: 30,000 Nm
- Max. rotation speed: 150 rpm
- Power rating: 190 kW
- Drive: electric motor
- Mud swivel: 2 x 1 1/2" / 100 bar
- Saver sub: NC38 (3 1/2" IF)
- Drive shaft adjustment: shiftable (80 mm)

Break-out unit

- Break-out torque: 45,000 Nm
- Make-up torque: 36,000 Nm
- Opening width: 220 mm
- Movable break-out unit, travel distance: 500 mm
- Drill pipe support on both sides

Crawler

- Type: crawler chassis
- Drive: electric motor driven by battery
- Ground travel speed: 2.8 km/h
- Control: remote control for crawler and rig-up operation
- Rubber pads for crawler tracks

Pipe Handling

- Type: automatic pipe box system with stackable and exchangeable pipe boxes
- Integrated pipe box
Capacity: 9 x 3.5" – drill pipes with 6.1 m length
- One stackable and exchangeable pipe box
Capacity: 9 x 3.5" – drill pipes with 6.1 m length

Mud Pump

- Type: onboard Triplex-piston pump
- Drive: electric motor

- Power rating: 146 kW
- Max. pressure: 62 bar
- Flow rate: 1,000 l/min (continuously); 1,500 l/min (max)
- Pulsation damper: yes
- External feed-in: (3" - Fig. 1502)

Electronic Performance Data

- Power supply: 400 V / 400 A / 3 ph, PE / 50 Hz
- Type: shock resistant mobile electronics, IP67
- Battery: integrated in DC intermediate circuit; operation of all functions possible; temperature management system integrated; energy recovery system implemented
- Cooling: internal water circuit

Control System / Operation Panel

- Control cabin: onboard, foldable for transportation
- Controls: joystick-operation and b-drive
- Display: 19"-touch-panel with individually configurable parameters
- Drill assistance system
- Ergonomic comfort driver's seat with vibration damping
- Cabin with air conditioning and heater
- Lighting of the rig via a large number of LED headlights
- Safety: anti-collision system

Standards

- Machinery Directive 2006/42/EC
- HDD-Standard DIN EN 16228-3
- Low Voltage Directive 2014/35/EU
- EMC-Directive 2014/30/EU

Options*

Pipe Handling

- Stackable pipe box
Capacity: 9 x 3.5" – drill pipes with 6.1 m length
- Drill pipe greasing unit
- Drill pipe cleaning system integrated in pipehandling system

Control System / Operation Panel

- Camera system: up to four cameras with permanent display in cabin
- Data recording: drilling data can be recorded and stored for later viewing
- Two-way radio
- Customisable remote access and remote maintenance
- Radio

Further Equipment

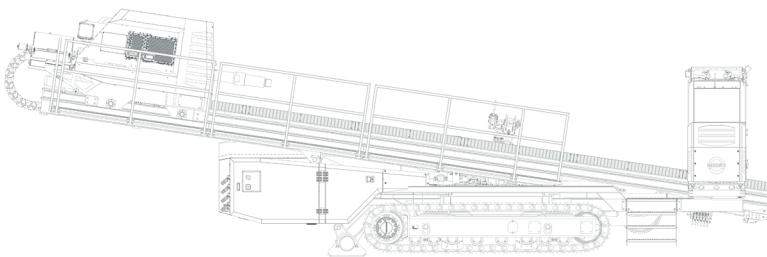
- Measuring cable reel: automatic reel with camera and lighting for 100 m measuring cable
- Integrated high pressure cleaner
- Access platform with ladder on mast for measuring cable connection works for steering tools
- Double flanged mud swivel, suitable for cable reel installation: 100 bar / 2 1/4"
- Cable for power supply

* further options available on demand



HDD80-E

TECHNICAL PRODUCT DATA SHEET



STREICHER HDD80-E

- Thrust / pullback load: 800 kN (80 t); 1,000 kN (100 t) (boost)
- Power rating: 400 kVA
- Transport weight: 40 t
- Dimensions (LxWxH): 15.6 x 3.0 x 3.2 m
- Ambient temperature: -20 to +40°C

Mast

- Length: 15.3 m
- Max. travel distance: 11.4 m
- Max. drill pipe length: 9.5 m (Range II)
- Mast drilling angle: 8° – 20°
- Anchor plate: heavy-duty-design with mud drain
- Walkways: width 1.0 m, along the mast

Thrust and Pullback

- Type: Rack & Pinion
- Thrust / pullback load: 800 kN (80 t); 1,000 kN (100 t) (boost)
- Min. carriage speed: 0.02 m/min
- Max. carriage speed: 30 m/min

Rotation Drive

- Max. drilling torque: 57,000 Nm
- Max. break-out torque: 70,000 Nm
- Max. rotation speed: 100 rpm
- Power rating: 190 kW
- Drive: electric motor
- Mud swivel: 100 bar / 3" / extra robust design
- Saver sub: NC50 (4 1/2" IF)
- Drive shaft adjustment: shiftable (80 mm)

Break-out Unit

- Break-out torque: 90,000 Nm
- Make-up torque: 70,000 Nm
- Opening width: 10" (245 mm)
- Movable along the mast
- Height adjustable drill pipe support

Crawler

- Type: crawler chassis
- Drive: electric motor driven by battery
- Control: remote control for crawler and rig-up operation

Electronic Performance Data

- Power supply: 400 V / 630 A / 3 ph, PE / 50 Hz
- Type: shock resistant mobile electronics, IP67
- Battery: integrated in DC intermediate circuit; operation of all functions possible; temperature management system integrated; energy recovery system implemented
- Cooling: internal water circuit

Control System / Operation Panel

- Control cabin: onboard, foldable for transportation
- Controls: joystick-operation and b-drive

- Display: 19"-touch-panel with individually configurable parameters
- Drill assistance system
- Ergonomic comfort driver's seat with vibration damping
- Cabin with air conditioning and heater
- Lighting of the rig via a large number of LED headlights
- Safety: anti-collision system

Standards

- Machinery Directive 2006/42/EC
- HDD-Standard DIN EN 16228-3
- Low Voltage Directive 2014/35/EU
- EMC-Directive 2014/30/EU

Options*

Pipe Handling

- Type: automatic pipe loading unit
- Capacity: 5 x 5"-drilling rods
- Rod supports: integrated in the mast with high precision and teachable position

Pipe Handling Crane

- Loading crane, remote controlled
- With integrated pipe gripper

Mud Pump (Onboard)

- Triplex-piston pump
- Drive: electric motor
- Power rating: 146 kW
- Max. pressure: 62 bar
- Flow rate: 1,000 l/min (continuous)
1,500 l/min (max)
- Pulsation damper: yes
- External feed-in: possible (3" - Fig. 1502)

Mud Pump (External)

- Various manufacturers possible
- Drive: electric motor
- Software integration in operator's control of drilling rig

Control System / Operation Panel

- Camera system: up to four cameras with permanent display in cabin
- Data recording: drilling data can be recorded and stored for later viewing
- Two-way radio
- Customisable remote access and remote maintenance

Further Equipment

- Measuring cable reel: automatic reel with camera for 100 m measuring cable
- Integrated high pressure cleaner
- Rubber pads for crawler tracks

*further options available on demand

with boost
function



PRODUCTS WITH ECOTEC LABEL – REDUCING EMISSIONS, PUSHING ENVIRONMENT PROTECTION...

Why ecotec? The industrial landscape is changing rapidly because the requirements for safety and efficiency are constantly increasing. In recent years, the issues of the environmental protection and nature conservation – and thus also the question of regenerative energy sources – have become particularly important. STREICHER also holds the objective to reduce CO₂-emissions in the future in order to counteract climate change. Therefore, STREICHER has made it a primary objective to reduce the ecological footprint by **launching own products that are driven electrically among others**. The many years of practical experience and the multilayered competences within the company group are providing support in integrating the new technologies into related modifications and new developments.

These efforts are summarised under a separate, appropriate label called ecotec. In line with the goal of decarbonisation, the ecotec label combines innovative technologies with future-focused trends and essentially combines the issues of **resource conservation, environment protection, energy efficiency and optimisation of the entire energy cycle**.

Besides the **fully electric driven HDD-E rigs** STREICHER has already brought the following products with ecotec label to marketability – a **fully electric driven mud pump**, that can be used in combination with the HDD-E rigs, **electrically driven welding tractors**, that are especially on duty within pipeline construction as well as **vacuum crawlers**, that are used for the efficient removal of soil materials. In line with our goal we also offer **retrofit services**.





**PROGRESSIVE AND
ECO-FRIENDLY**

**OUR HDD-E SERIES REPRESENTS INNOVATIVE,
ENVIRONMENTAL FRIENDLY AND POWERFUL DRILLING PROCEDURES.**

