



TESMEC FIBER OPTIC SOLUTIONS





TRENCHING THE PATH TO THE FUTURE

We make it **faster**, thanks to our technology efficiency.

We make it **easier**, thanks to our people expertise.

We make it **cleaner**, containing noise levels and dust.

We reduce the overall **costs**, limiting people and machinery.

We make it **safer**.

We respect the **environment**.



TESMEC

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Tesmec S.p.A.
Grassobbio (Italy)

Saudi Tesmec
Riyadh (Saudi Arabia)

Tesmec USA
Alvarado, TX (USA)

Marais Laying NZ
Wellington, New Zealand

Tesmec SA
Edenvale (South Africa)

Tesmec Guinea
Conakry (République de Guinée)

Groupe Marais
Durtal (France)

Tesmec Peninsula
Doha (Qatar)

Tesmec Australia
Mount Druitt, NSW (Australia)

Tesmec Energy
Algeri, Algeria

Tesmec Maroc
Casablanca (Morocco)

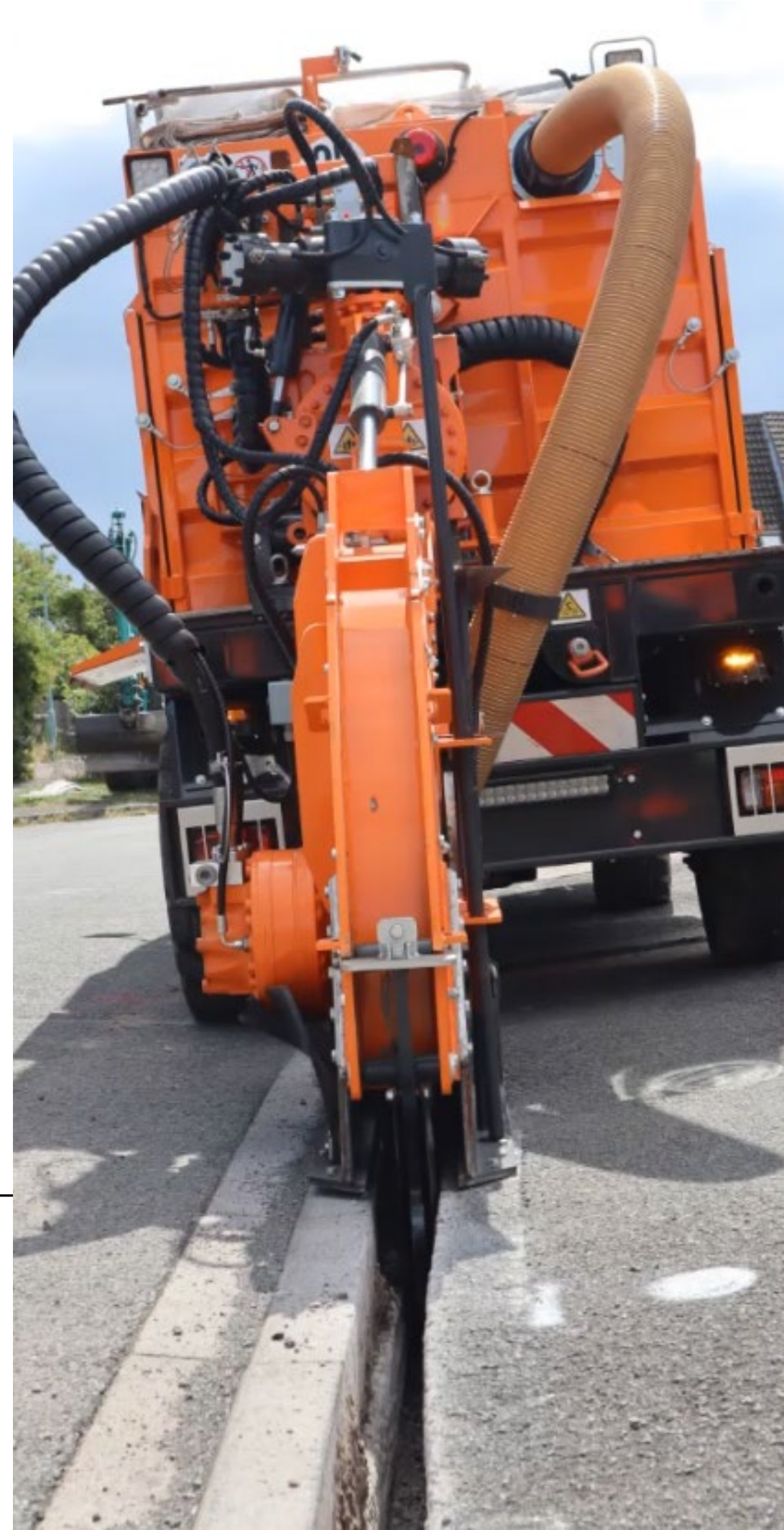
Marais Cote D'Ivoire
Bietry (Cote D'Ivoire)

**Tesmec New
Technology**
Beijing (China)






THE HISTORY



| | |
|---|--|
| <p>1951-1960</p> <p>Pioneer in stringing solutions</p> | <p>Establishment of “CRF-Officina Meccanica di Precisione”</p> <p>Edison patent for the new tension stringing system</p> |
| <p>1984</p> <p>TRENCHER product line development</p> | <p>Establishment of Tesmec USA Inc. in Texas, USA</p> |
| <p>2010</p> <p>From family to public company</p> | <p>Entry in the Italian Stock Exchange (STAR segment)</p> |
| <p>2012</p> <p>Expansion strategy in the RAILWAY business</p> | <p>Leasing of AMC2 S.r.l (Monopoli - Italy)</p> |
| <p>2015</p> <p>Acquisition of the French Group Marais</p> | |

| | |
|--|---|
| <p>Tesmec Automation as a single Company</p> | <p>2017</p> <p>Investments & acquisitions to complete the portfolio for SMART GRIDS</p> |
| <p>Opening of the new Tesmec Rail s.r.l. production site (Monopoli – Italy)</p> | <p>2018</p> <p>Investments in R&D and DIAGNOSTICS</p> |
| <p>4Service, a Company dedicated to the rental business</p> <p>Share capital increase</p> | <p>2020</p> <p>Strengthening the Service and Rental Business</p> |
| <p></p> | <p>2021</p> |
| <p>ENERGY TRANSITION</p> <p>DIGITALIZATION</p> <p>SUSTAINABILITY</p> | <p>2024</p> |



***TESMEC
ADVANTAGES
VS
TRADITIONAL
METHODS***

Productivity

Experience unmatched productivity with Tesmec cutting-edge trenching machines. One trencher can outperform multiple traditional machines, making projects faster and more efficient, increasing your revenues and minimizing operating costs

Quality and accuracy

Achieve high performances in all soil conditions, including long-distance projects, by minimizing the trenching volume and reducing the backfilling material. In addition, you can rely in a faster, more accurate and longer-lasting trench reinstatement

Logistics

Simplify your operations and reduce costs with our trenching technology. Fewer machines and operators are required, leading to lower logistics expenses and easier site management



Flexibility

Tesmec trenchers are incredibly versatile and can work in urban, suburban, and rural jobsites with limited disturbance. You can rely on them to adapt to your project's unique requirements

Environment

By using our machines, you'll reduce CO2 emissions and fuel consumption. In addition, our trenching technology allows for a reduction in excavated and filled volumes, further minimizing the environmental impact

Traceability

Stay in control of your projects with real-time traceability and georeferenced data of the laid fiberducts, and successfully manage your site operations

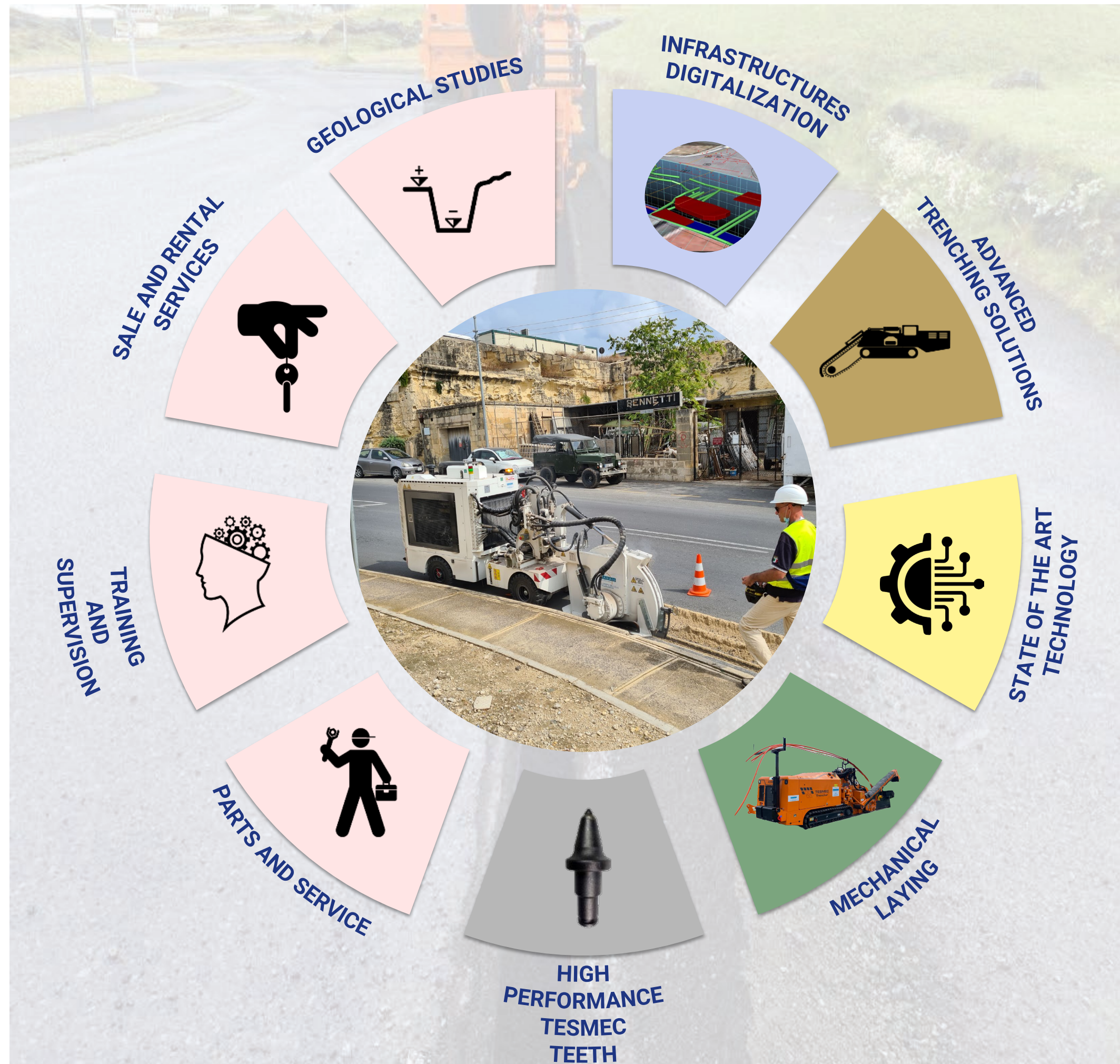


***INTEGRATED
VALUE
PROPOSITION***

Tesmec trenchers are **clean and fast solutions** designed to facilitate the installation of underground conduits essential for telecommunications networks, including urban fiber networks (FTTx), suburban networks (Ring), and long-distance networks (backbone).

Tesmec provides an **integrated value chain**, complemented by:

- Precise underground utilities detection and mapping
- Micro, mini and backbone trenching techniques
- Advanced vacuum technology
- Mechanical laying of cables
- Expertise in backfilling and road surface finishing



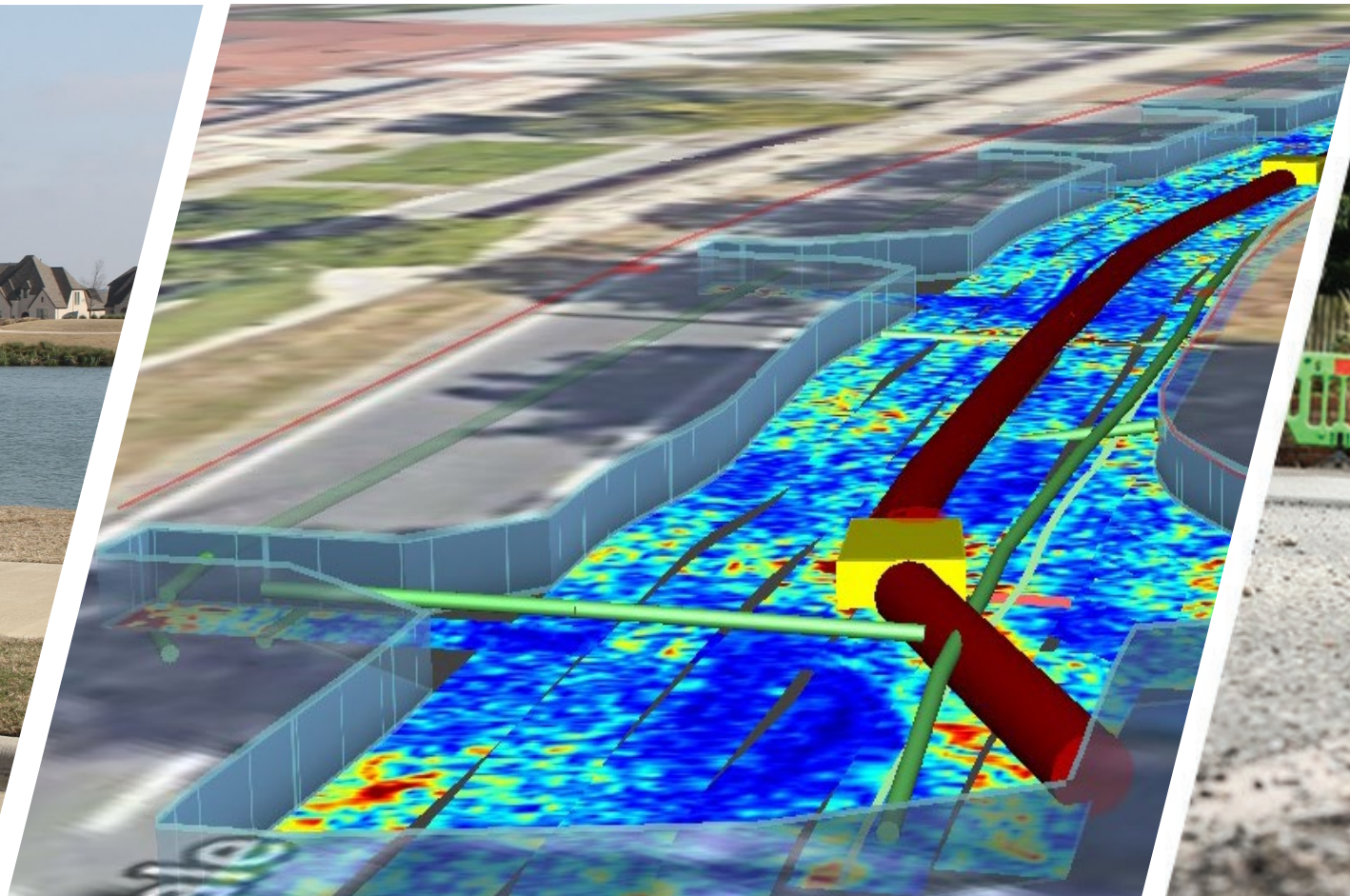


**OUR
METHODOLOGY**

1. UNDERGROUND UTILITIES DETECTION



2. UNDERGROUND UTILITIES



MAPPING

3. TRENCHING



4. MECHANICAL LAYING



5. ADVANCED VACUUM



TECHNOLOGY INTEGRATION

6. BACKFILLING AND ROAD SURFACE FINISHING





***THE
ADDED VALUE***

High reliability and performances

Tesmec trenchers are characterized by high reliability to ensure maximum productivity and uninterrupted work, thanks to high-quality manufacturing. In addition, new digging teeth, easier maintenance and servicing keep operating costs to a minimum.

Trench quality

Tesmec stands out for the quality of the finished work, thanks to clean and safe trenches. The backfilling and finishing stages are carried out with extreme precision, guaranteeing a complete, high-quality result.

Speed of execution

Thanks to the excavation performance and integration with cable-laying and excavated material loading solutions, Tesmec trenchers ensure unmatched site execution speed and safe cables laying operations.

State-of-the-art technology

Rely on Tesmec's state-of-the-art technologies to maximize the in-site efficiency thanks to the machine electronic control, the remote monitoring and reporting and the as built data recorder. The radio control system enables the operator to control the machine remotely, increasing the safety in site, the visibility on the trenching area and on the trenching tool.



HIGH RELIABILITY AND PERFORMANCES



TRENCH QUALITY



SPEED OF EXECUTION



STATE OF THE ART TECHNOLOGY



***PRODUCTS
OVERVIEW***



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CityCleanfast

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1150EVO

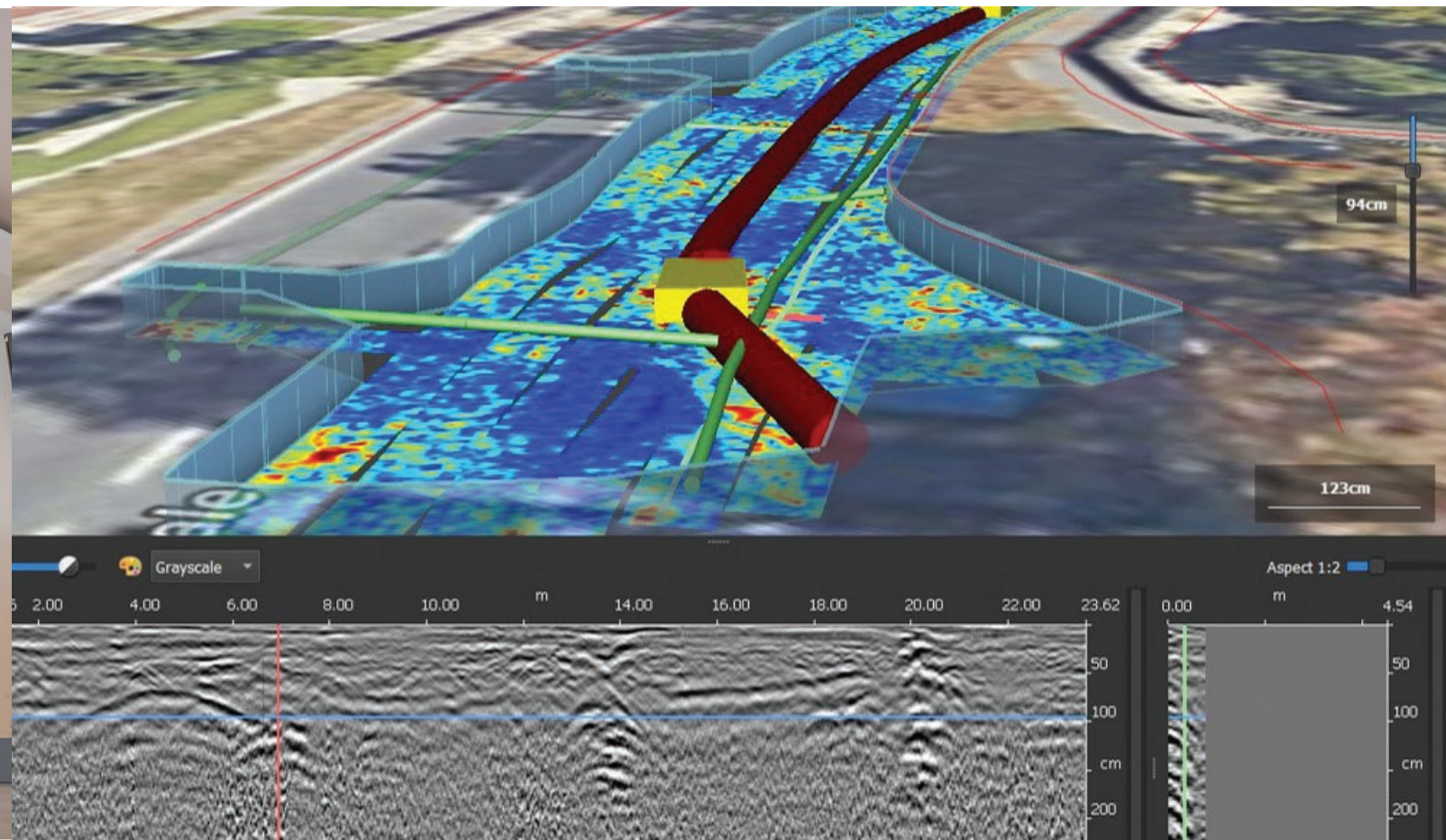
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GEORADAR 3.0

- + *EFFICIENT UNDERGROUND UTILITIES DETECTION***
- + *AVOID UTILITIES STRIKE INCIDENTS***
- + *EASY TO USE***
- + *SPEED OF EXECUTION***
- + *EASY TO TRANSPORT***



TECHNICAL DATA

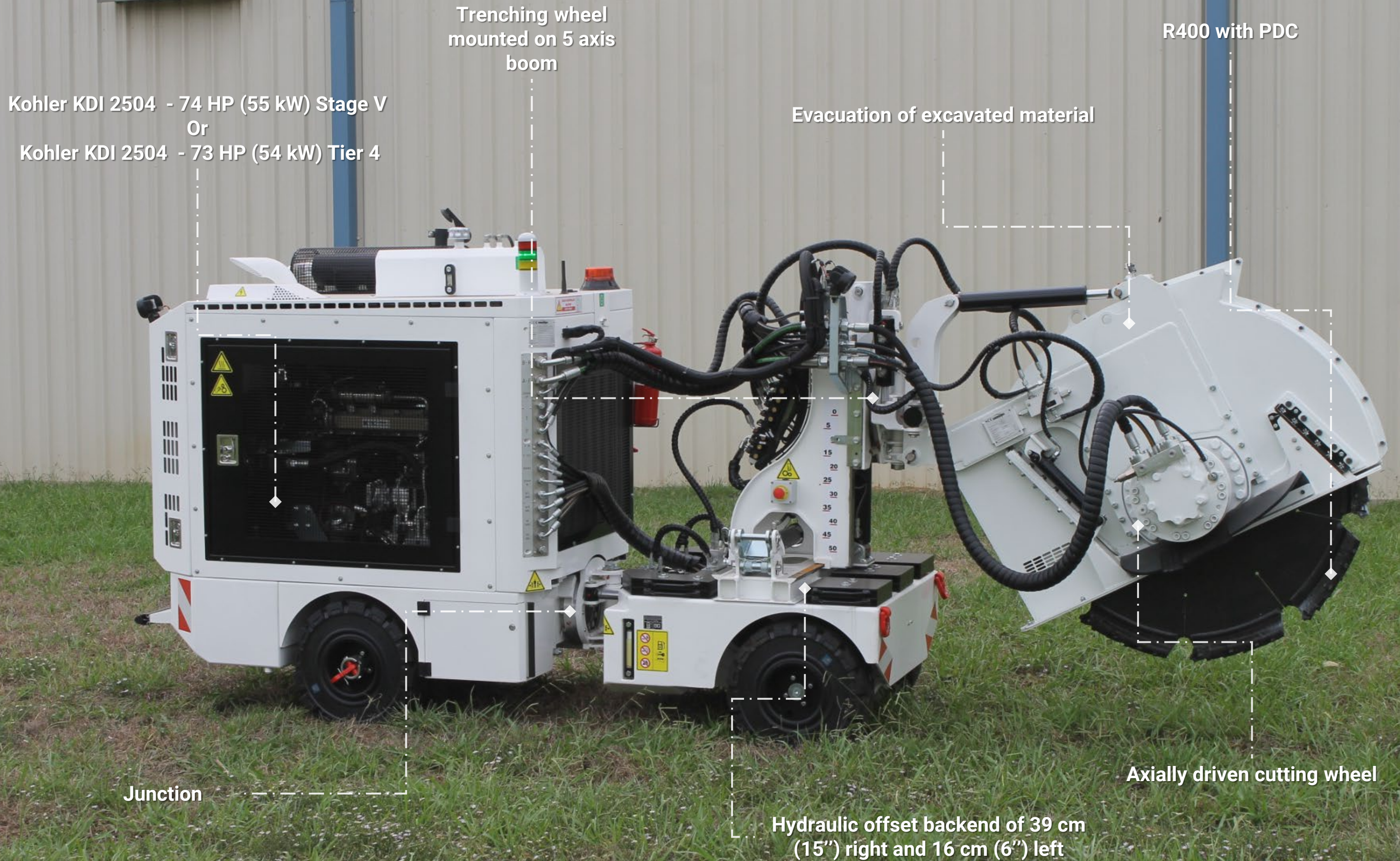
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|------------------------------|------------------|-----------------------------|-----------|
| Sensor frequency | 600 MHZ | Acquisition software | Umap |
| Scanning width | 32" | Processing software | IQMaps |
| Number of channels | 30 (19VV - 11HH) | Weight | 92 pounds |
| Max acquisition speed | 8.7 mph | | |

Tesmec Georadar Explorer 3.0 is a Ground Probing Radar - GPR - which detects underground utilities, optimizing trenching and laying operations. This system has been developed to guarantee the safety of trenching work sites and to increase operational speed, avoiding utilities strike incidents. The new brackets lock and stabilize the antenna during acquisition, facilitating its movement. All the electronics, including the Control Unit, are inside the antenna box. Lithium batteries, reduced in size and weight, replace the previous lead - acid batteries and guarantee a longer service life. The GPR, integrated with the 3D LiDAR (the mobile detection system through photographs and 3D laser scanner) and the drone (for a high definition aerophotogrammetry) provide a mobile laboratory for a state-of-the-art jobsite.



SC4P

- + **COMPACTNESS**
- + **CLEAN EXECUTION**
- + **COST EFFICIENCY**
- + **FAST EXECUTION**
- + **LOW TRAFFIC IMPACT**





TECHNICAL DATA

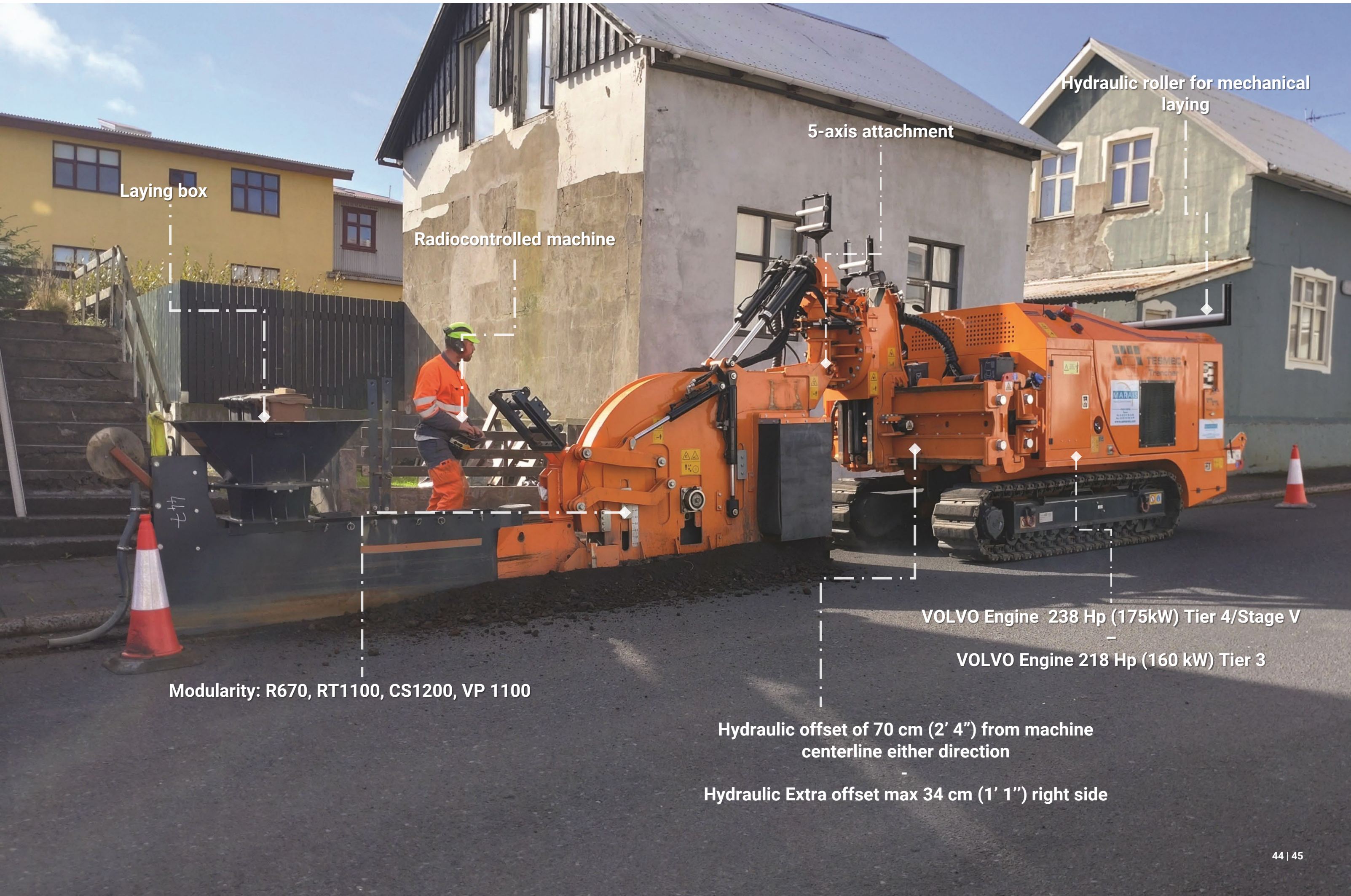
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|------------------|----------------------|---------------|---|---------------|
| Engine | Kohler KDI 2504 | | Digging depth R400* | 10" - 16" |
| Max Power | Tier 4 | 73 Hp (54 kW) | Digging width R400* | 3/4" - 2-3/4" |
| | Stage V | 74 Hp (55 kW) | * PCD wheel and external vacuum unit required | |
| Weight | 3.000 kg 6.600 lbs | | | |

Sidecut SC4P is a fully radio-controlled wheeled trencher designed for the deployment of fiber optic networks in urban environments. Its articulated steering allows a great maneuverability, making it ideal also for cutting on sidewalks with limited disturbance to pedestrian and traffic during the works. The trenching wheel is mounted on a 5-axis boom, resulting in greater trenching versatility and, thanks to the axially driven digging disc, flexible cutting is ensured. In addition, removable cutting segments allow optimal production with lower maintenance costs. SC4P assures less personnel needed on site, increases the safety and reduces the environmental impact. On-board GPS system allows to create "As-Built" documentation. Weights could be removed for reducing transportation costs.



400 MCT

- + *ADAPTED TO MANY APPLICATIONS*
- + *HIGH MANEUVRABILITY IN URBAN ENVIRONMENTS*
- + *INTERCHANGEABLE DIGGING ATTACHMENTS*
- + *MECHANICAL LAYING READY*
- + *NO ROAD SURFACE DAMAGES*



Laying box

Radiocontrolled machine

5-axis attachment

Hydraulic roller for mechanical laying

VOLVO Engine 238 Hp (175kW) Tier 4/Stage V

VOLVO Engine 218 Hp (160 kW) Tier 3

Modularity: R670, RT1100, CS1200, VP 1100

Hydraulic offset of 70 cm (2' 4") from machine centerline either direction

Hydraulic Extra offset max 34 cm (1' 1") right side



TECHNICAL DATA

| | | | | |
|------------------|--|-----------------|-----------------------------|-----------------------------|
| Engine | Tier 4/Stage V | VOLVO TAD583VE | Digging depth R670 | 30 - 67 cm 1' - 2'2" |
| | Tier 3 | VOLVO TAD583VE | Digging width R670 | 8 - 20 cm 3" - 8" |
| Max Power | Tier 4/Stage V | 238 Hp (175 kW) | Digging depth RT1100 | 75 - 110 cm 2' 5" - 3' 7" |
| | Tier 3 | 218 Hp (160 kW) | Digging width RT1100 | 18 - 28 cm 7" - 11" |
| Weight | 10.000 - 15.500 Kg 22000 - 34100 lbs | | Digging depth CS1200 | 70 - 120 cm 2' 3" - 4' |
| | | | Digging width CS1200 | 18 - 35 cm 7" - 14" |

400MCT is a high-performance trencher designed for long-distance fiber optic, electric cables, and small diameter water pipelines projects in urban and rural environments. This machine can be equipped with an axial wheel (R670), a tangential wheel (RT1100), a chainsaw (CS1200) or a VP1100 plow, allowing it to meet the challenges on site with maximum modularity and flexibility. The radio-controlled models feature an offset back-end digging facility, a mechanical cable laying concept (available upon request) a bucket loading conveyor system (in R670 configuration) and a truck loading conveyor (in CS1200 configuration). 400MCT is designed to work parallel close to the hard shoulder of the road in order to limit traffic and pedestrian disruptions. It is equipped with Tesmec state of the art technology, such as TrenchTronic, Re.m and Smart Tracker to maximize excavation efficiency, increase productivity, fleet monitoring and recording data.



CITYCLEANFAST

- + VACUUMING AND COLLECTING EXCAVATED MATERIAL SIMULTANEOUSLY***
- + AGILITY IN CITY CONTEXT***
- + COMPLETE AIR FILTRATION FROM DUST AND WASTE MATERIALS***
- + REDUCED DISTURBANCE FOR ROAD USERS***
- + CLEAN AND SILENT EXECUTION***



Trenching wheel mounted
on 5 axis boom

Engine Tier 4/Stage V PERKINS 1204J-
E44TA – 142 HP (105 kW)

Radiocontrolled machine

Vacuum system

4 directional wheels

Axially driven cutting wheel



TECHNICAL DATA

| | | | |
|------------------|------------------------------------|---|---------------|
| Engine | Tier 4/Stage V PERKINS 1204J-E44TA | Digging depth | 12" - 18" |
| Max Power | 142 Hp (105 kW) | Digging width | 3/4" - 3-1/4" |
| Weight | 9.740 Kg 21473 lbs | * width up to 2-3/4": PCD wheel recommended * width 3" and over: Carbide wheel recommended | |

City Cleanfast is a remote-controlled solution to deploy fiber optic and electric networks in urban environment and highways, thanks to the high maneuverability granted by compact dimensions and four directional wheels. This machine assures high productivity and performances, cost efficiency and a clean and fast deployment. The tilting cutting wheel is axially driven and simultaneously vacuums and collects the excavated material via a suction system, as well as a complete filtration of rejected air. City Cleanfast is the urban solution to reduce amount of excavated material with adapted narrow tools and no material or dust thrown out during earth works.



CLEANFAST

- + *DESIGNED FOR THE AMERICAN MARKET*
- + *VEHICLE TRAFFIC NOT INTERRUPTED DURING WORKS*
- + *SIMULTANEOUS TRENCH AND SUCTION OF THE EXCAVATED MATERIAL*
- + *TRENCH IN CURVES AND SIDEWALKS*
- + *ON-HIGHWAY TRUCK*

Radiocontrolled machine

Excavated material loaded by a suction system

Hydraulic offset of 154 cm (5'0") right and 81 cm (2'8") left

Volvo engine 420 Hp – Euro 6

Easily usable road vehicle

Axially driven cutting wheel with multiple cutting attachment configurations





TECHNICAL DATA

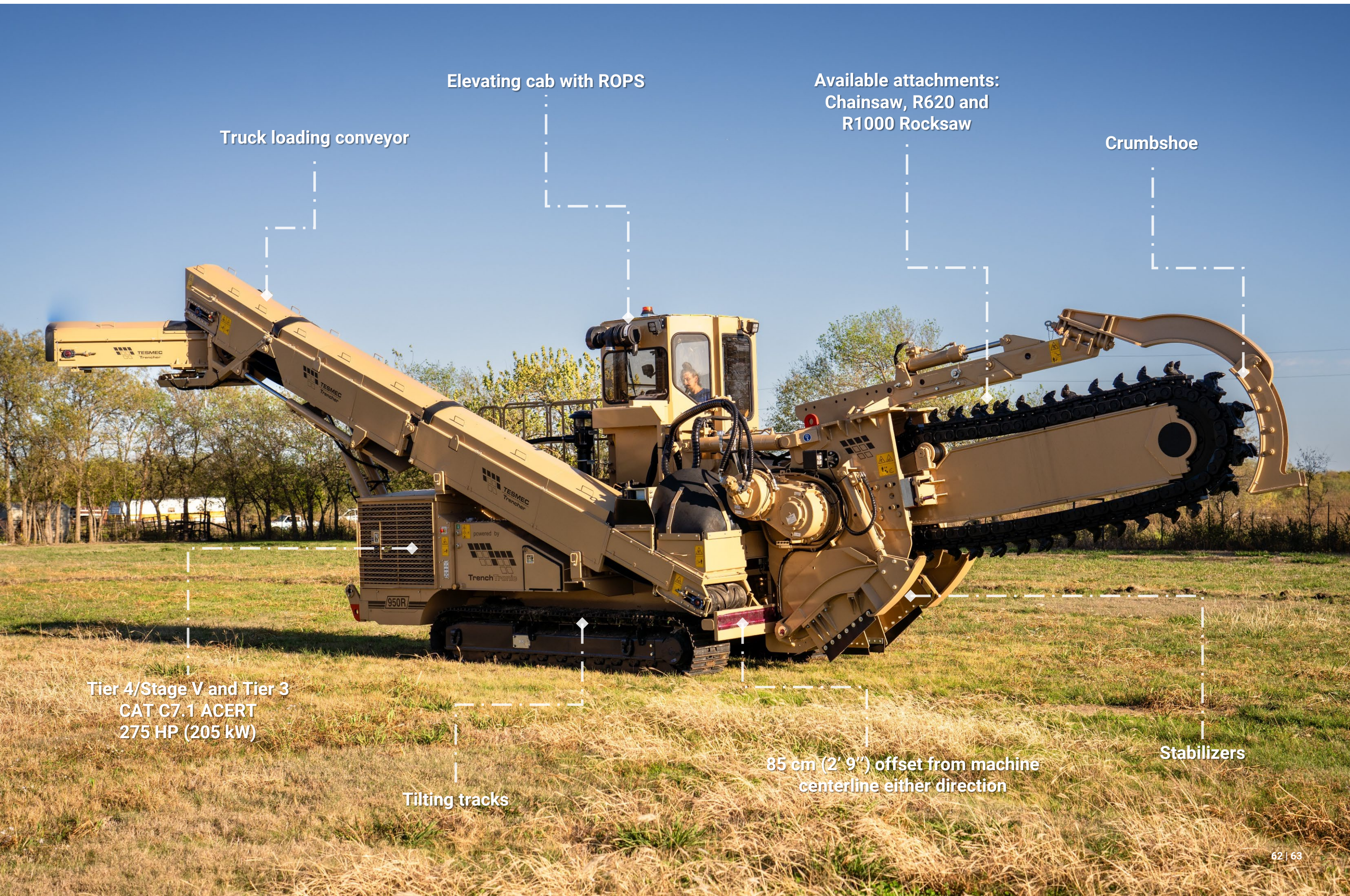
| | | | |
|-------------------------|--|------------------------------|---------------|
| Engine | VOLVO VHD TRIDEM 8X6 D13 6 | Digging depth R500 | 20" (1' 8") |
| Engine Max Power | 425 HP (317 kW) | Digging width R500 | 3" - 5 1/4" |
| Weight | 24.900 - 25.100 kg 55100 - 55300 lbs | Digging depth R500PCD | 20" (1' 8") |
| | | Digging width R500PCD | 3/4" - 2 3/4" |
| | | Digging depth R670 | 26" (2' 2") |
| | | Digging width R670 | 3" - 5 1/4" |
| | | Digging depth R670PCD | 26" (2' 2") |
| | | Digging width R670PCD | 1" - 2 3/4" |

Cleanfast, customized for the American market, is a versatile machine assuring high productivity, accuracy, limited disturbance to residents and quick restoration of the road. It's a performant trencher for a cost efficient, clean and fast deployment of fiber optic and electric networks in urban and motorway environments. It's a very usable road vehicle designed in compliance with USA regulation, equipped with powerful Volvo engine (425 Hp) and with an axially driven wheel. Cleanfast US is able to dig and simultaneously vacuum out and collect the excavated material, trenching in curves and sidewalks in different soil types (concrete, asphalt, rock). Cleanfast US assures a clean and dust-free job site, a reduced amount of excavated material produced with adapted narrow tools and no material or dust thrown out during earth work. It provides complete filtration of rejected air.



950R

- + **IDEAL SOLUTION FOR BACKBONE AND LONG DISTANCE FIBER OPTIC INSTALLATION**
- + **MECHANICAL LAYING READY**
- + **DESIGNED TO WORK CLOSE TO THE SIDE OF THE ROAD**
- + **LIMITED TRAFFIC DISTURBANCE**
- + **MODULARITY: CHAINSAW, ROCKSAW R620 AND R1000**



Truck loading conveyor

Elevating cab with ROPS

Available attachments:
Chainsaw, R620 and
R1000 Rocksaw

Crumbshoe

Tier 4/Stage V and Tier 3
CAT C7.1 ACERT
275 HP (205 kW)

Tilting tracks

85 cm (2' 9'') offset from machine
centerline either direction

Stabilizers



TECHNICAL DATA

| | | | | |
|------------------|--|----------------|----------------------------|---------------------------|
| Engine | Tier 4/Stage V | CAT C7.1 ACERT | Digging depth CS | 91 - 183 cm 3' - 6' |
| | Tier 3 | CAT C7.1 ACERT | Digging width CS | 20 - 63 cm 8" - 25" |
| Max Power | 275 HP (205 kW) | | Digging depth R620 | 30 - 62 cm 1' - 2' |
| Weight | 20.000 - 27.700 kg 44100 - 61068 lbs | | Digging width R620 | 10 - 15 cm 4" - 6" |
| | | | Digging depth R1000 | 50 - 100 cm 1'8" - 3'3" |
| | | | Digging width R1000 | 10 - 20 cm 4" - 8" |

950R is a versatile trencher designed for in-line excavation for fiber optic installation, power cables, water & gas pipes. It features offset digging chain to work in close proximity to the shoulder of the road, tilting tracks for not levelled grounds, elevating cab and - as main optional - automatic cable laying system, back-filling system and truck loading conveyor. 950R tractor can also be equipped with R1000 and R620 Rocksaw attachments. This machine guarantees speed of execution and extreme accuracy allowing for time and costs savings, as it is able to trench, load materials onto a truck, lay the cable and backfill the trench. Equipped with TrenchTronic 4.0 system, TrenchIntel, Re.M and Smart Tracker to maximize trenching efficiency.



1075

- + **HARD ROCK EXCAVATION**
- + **RIGID AND ROBUST FRAME**
- + **MECHANICAL LAYING READY**
- + **ADAPTED TO MULTIPLE APPLICATIONS**
- + **MODULARITY: ROCKSAW AND BUCKET WHEEL ATTACHMENTS**



Pre-position and distanced cables

Pressurized cab with ROPS

Rollers for mechanical laying

Tier 4/stage V engine – CAT C9.3B ACERT
375 Hp (280 kW)

Cross conveyor system

Flywheel gearboxes

Stabilizers with adjustable drags



TECHNICAL DATA

| | | | | |
|------------------|--|-----------------|-------------------------------|---------------------------|
| Engine | Tier 4/Stage V | CAT C9.3B ACERT | Digging depth Chainsaw | 123 - 305 cm 4' - 10' |
| Max Power | | 375 HP (280 kW) | Digging width Chainsaw | 35 cm - 91 cm 14" - 36" |
| Weight | 36.700 - 44.500 kg 80.900 - 98.100 lbs | | Digging depth Rocksaw | 142 cm 4' 8" |
| | | | Digging width Rocksaw | 15 - 35 cm 6" - 14" |

Tesmec 1075 is a high-productivity trencher designed for utilities, fiber optic and underground energy cables projects in rocky soils. 1075 is a modular machine with the available Chainsaw, Rocksaw and Bucket Wheel attachments. Chainsaw and Rocksaw attachments are the ideal solution for hard rock excavation, thanks to the rigid frame and the mechanical digging drive (flywheel gearboxes) driven by hydrostatic digging transmission. Due to its mechanical laying capability, it is a solution that can be used in projects for precisely digging trenches and laying electrical cables at the same time. 1075 is equipped with Tesmec state of the art technology, such as TrenchTronic, TrenchIntel, Re.m and Smart Tracker, to maximize excavation efficiency, increase productivity, fleet monitoring and recording data.



1150EVO

- + **LONG DISTANCE FIBER OPTIC INSTALLATION**
- + **HARD ROCK EXCAVATION**
- + **RIGID AND ROBUST FRAME**
- + **PRECISE AND CLEAN TRENCHES**
- + **MODULARITY: CHAINSAW, ROCK HAWG AND DYNAMIC DRUVE ATTACHMENTS**



Rocksaw attachment

Pressurized, elevating cab with ROPS and FOPS

Protection system

Tier 4/stage V engine – Cummins X12
451 Hp (336 kW)

Tier 3 engine – CAT C13
440 Hp (328 kW)

Tilting tracks

Stabilizers with adjustable drags



TECHNICAL DATA

| | | | | |
|------------------|---|-----------------|-------------------------------|-------------------------|
| Engine | Tier 4/Stage V | Cummins X12 | Digging depth Rocksaw | 137 cm 4' 6" |
| | Tier 3 | CAT C13 ACERT | Digging width Rocksaw | 15 - 35 cm 6" - 14" |
| Max Power | Tier 4/Stage V | 451 HP (336 kW) | Digging depth Chainsaw | 183 - 427 cm 6' - 14' |
| | Tier 3 | 440 HP (328 Kw) | Digging width Chainsaw | 35 - 107 cm 14" - 42" |
| Weight | 44.000 - 47.000 Kg 97000 - 103600 lbs | | | |

1150 EVO RS is a Rocksaw Tesmec trencher conceived for long-distance fiber optic networks, electric cable projects and small diameter pipelines. 1150EVO is a high-performance rock-cutter featuring a saw cutting up to 137 cm (4'6") deep and 35 cm (14") wide. EVO technology guarantees the best performance on hard rocks with increased productivity and reduced teeth consumption and maintenance costs. 1150EVO is a modular machine adaptable for multiple applications due to its available attachments: Rocksaw, Chainsaw, Rockhawl and Dynamic Drive. The TrenchTronic 5.0, TrenchIntel, Re.m and Smart Tracker state of the art technologies maximize excavation efficiency, increase productivity, fleet monitoring and recording data.



**STATE OF THE
ART
TECHNOLOGY**

TrenchTronic

The automatic trenching and self diagnostic technology. It is an electronic control system designed to improve the ease of use of the trencher and increase productivity by making it less dependent on operator skills.

TrenchIntel (* available on certain machines)

The 3D-GPS automatic guidance system. It is the satellite guidance system capable to automatically control machine steering, trajectory and trenching depth with extreme precision

Re.M

The remote monitoring and reporting technology. It provides on-demand retrieval of operating, maintenance and troubleshooting information to help improving each machine's bottom-line performance.

Smart tracker

The as built data recorder. SmartTracker automatically collects as-built data while the machine is trenching, avoiding survey stakeout and reducing time and costs

TRC

The trencher radio control system. It enables the operator to control the machine remotely through a radio contro, increasing the safety in site, the visibility on the trenching area and tool.





***CUSTOMER
SERVICE***

After sales and customer service

- Inspections and machine Start-up
- Machine operation and repair
- Worldwide fleet remote monitoring and assistance
- Technological support, monitoring and analysis of machine data to optimize utilization
- Jobsite management
- Machine data monitoring

Consultancy and studies

- Expertise
- Know-how
- Feasibility studies
- Technical advice and consultancies
- Geotechnical analysis

Project management

- Services and solutions for all digging projects
- Work site control and experienced operators
- Spare parts management
- Specialized Tesmec team for mechanical assistance

Spare parts service

- Worldwide reaching
- Support in defining jobsite spare parts assortment
- Mobile workshops and mobile warehouses
- Interparts portal for original Tesmec spare parts



TESMEC

Discover Tesmec unique Customer Experience

