TRENCHLESS DIRECTIONAL

HORIZONTAL DRILLING

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GÖKER

HORIZONTAL DIRECTIONAL DRILLING (HDD)

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NETWORK WATER & SEWAGE

STRONG FOUNDATION

LARGE MACHINE FLEET

ELECTRICITY, NATURAL GAS

SUCCESSFUL PROJECTS

CORPORATE GOVERNANCE

HIGH TECHNOLOGY

OVERSEAS EXPERIENCE

EXPERT TEAM

ABOUT US

Our company was established in 1990 and started its activities in infrastructure sector. It later operated in petroleum, international transportation and mining works. The company incorporated trenchless horizontal directional drilling (HDD) machines in 2011. HDD plays a significant role in infrastructure construction thanks to the facts that laying pipes and cables under the ground does not require open excavation and drilling process can be monitored above the ground at all stages. This prevents horizontal drilling from damaging existing underground structures, lines and networks.

GÖKER has aimed to expand its machine fleets since the day it was founded. It currently has a machine park that consists of eight HDD machines, pipe pushing machine, excavator, forklift, eight trailer trucks, water tank, six pickup trucks and three passenger cars. GOKER has the highest capacity HDD machine in Turkey (having a capacity of 110 tons with 60" diameter pipe drilling up to 1500 m).

Currently 50 people are employed in our company, all of whom have had experienced with the projects at home and abroad. The employees hence has years of experience on HDD.

The company has successfully completed many works. Besides quite a few small scale jobs, GÖKER has finished 30 large-scale drilling operations. Among the companies that GÖKER works with are world famous companies, to name a few, TEIAS, GEDIZ Electricity, ENERJISA, POLIMEKS, TANAP, KOLIN, BOTAS. The company has also quite a few projects undergoing at the moment.

GÖKER has just opened up a branch in Bagdad and expects to aspire large projects in Iraq and other countries.

OUR EQUIPMENT POOL

▶ 2 ADET VERMEER D36X50 SERIES II

▶ VERMEER D40X55 S3

▶ VERMEER D60X90 S3

▶ VERMEER D100X140 S3

▶ VERMEER D220X300 S3

▶ VERMEER MCL 54/60

▶ VERMEER HHGB-100

▶ PIPE PUSHING MACHINE (32"- 100")

▶ HITACHI EXCAVATOR

▶

▶

▶ HYUNDAI FORKLIFT

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HEAVY EQUIPMENT	DRILLING DISTANCE M	TONNAGE
VERMEER D36X50 SERIES II	450	17,2
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VERMEER D40X55 S3	550	18,7
VERMEER D60X90 S3	700	27,2
VERMEER D100X140 S3	800	45,5
VERMEER D220X300 S3	1500	110
VERMEER MCL 54/60 PIPING MACHINE (32"- 60")	250	475
VERMEER HHGB-100 PIPING MACHINE (12"- 32")	200	275
PIPE PUSHING MACHINE (32"- 100")	200	600
HITACHI RUBBER WHEELED EXCAVATOR	-	20
HYUNDAİ FORKLIFT	-	3,5

VEHICLES	BRAND	NUMBER
TIR TRUCK	MERCEDES	4
TIR TRUCK	MAN	2
TRUCK	MERCEDES	2
WATER TANK	MERCEDES	1
DOUBLE CABIN TRUCK PIKAP (4X4)	WOLKSVAGEN	2
DOUBLE CABIN TRUCK PIKAP	MITSUBISHI	4
VEHICLE	AUDI	2
VEHICLE	OPEL	1

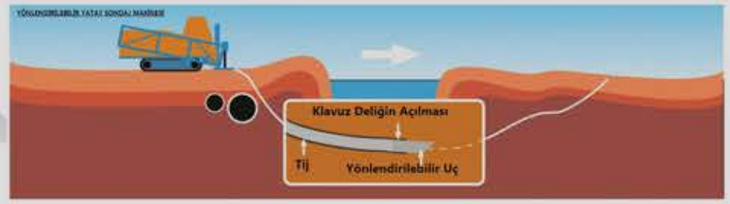
HORIZONTAL BORING

In our rapidly developing world, a great race is observed in bringing the projects under the ground in a short time and under more economic conditions. The directional horizontal drilling system implemented in the USA since 1983 was started to be used in all European countries in the 90's.

During these times, pipe boring, pipe jacking or a method simply called horizontal boring has been used in Turkey in order to to lay pipes to the under road and railways. Since 2000, the method known as Horizontal Directional Drilling Technology has been used instead of horizontal drilling methods.

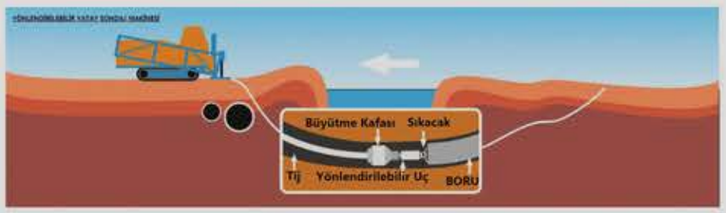
WORKING PRINCIPLE

OPENING PILOT HOLE



TUNNEL DIAMETER ENLARGEMENT

PIPE PULLING STAGE



TECHNOLOGY

Directional horizontal drilling (HDD) method, one of the innovations of trenchless technology, is one of the most suitable techniques in such works as laying water, electricity or natural gas pipes under the obstacles like highway, railway, stream, lake, etc.

In this method, polyethylene and steel pipes can be utilized. Thanks to our existing machine park, piping can be installed at distances of up to 1500 m and diameters of up to 60" (depending on the type of formation).

In the HDD method, a pilot drilling is performed first. The drill (owing to its shape) can direct the drill in the desired direction and owing to the locator can determine the desired direction and coordinate. The tug conveys the pushing force received from the machine to the drill (in addition, the friction resistance of the formation is overwhelmed by injecting the pressurized lubricating fluid to the formation with hydraulic pumps) and thus performs the drilling.

"DELIVERY OF MORE THAN **1000 PROJECTS OF TRENCHLESS** DIRECTIONAL HORIZONTAL DRILLING IN DOMESTIC AND OVERSEAS ROUTES"

ADVANTAGES OF HORIZONTAL DRILLING

- It ensures low cost and fast realization of projects.
- Existing units in the upper structure (Tree, Building, Pavement, Asphalt etc.) are not damaged in any way.
- The simultaneous withdrawal of more than one pipe creates a regular association in the infrastructure.
- Pipes and cables previously installed by Telekom, TEDAŞ, BOTAŞ, Water and Sewerage organizations are certainly undamaged due to the orientation of Horizontal Drilling.
- Everyday life during work is not affected. Pedestrians and vehicles can continue their movement on the working area. The pavements and asphalts are not disturbed, the parks and gardens are not damaged.

IMPORTANCE OF DRILLING MUD

Drilling mud is completely harmless and a special slurry that is prepared by mixing water and Bentonite material, which is a purified volcanic clay, along with polymers that may be needed according to soil type, that ensures that the soil within the tunnel during drilling reaches the earth, and that has technological features. Drilling mud protects underground equipment, reduces wear and provides floatation of the pipes to be pulled.

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APPLICABLE PLACES

- ALL ENERGY LINES
- AIRPORTS
- WATER NETWORKS AND INSTALLATIONS
- TRAIN ROADS AND RAILWAY SYSTEM
- HIGHWAYS, STREETS AND STREETS, PARK AND GARDENS
- COMMUNICATION AND COMMUNICATION LINES
- HISTORICAL FIELDS
- NATURAL GAS LINES
- RIVER AND STREAM CROSSINGS WATER CHANNELS

ONLY ONE MACHINE IN TURKEY

DRILLING BORES OF 60” DIAMETER IN 1500 METER LONG

With a pipe towing Capacity of 110 tones is ours..!

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MUD MOTOR TECHNOLOGY

Mud motor used for drilling guide hole with the ability to redirect firm soils (rock etc.) works with pressurized liquid flow movement produced by boring water and mud of drilling inserts.

Mud Motor is able to overcome all obstacles in the substructure with the torque power obtained from the pressure of the boring fluid.

Thanks to the Mud Motor technology that we have provided to the infrastructure of our country, we are your fast and high quality solution partner to pass the rock, concrete blocks and firm soils that may be encountered in your infrastructure works.

ADVANTAGES

Extremely hard rock formations can be drilled with engines that use diamond or PDC bits.

High penetration rates can be achieved because of the high rotational speed.

Thanks to the horsepower or torque generated independently by the engine, it also provides guidance for pilot drilling on rock soils and opening of the guide hole.

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"FLAWLESS MUD MOTOR TECHNOLOGY IN THE MOST FIRM ROCK SOILS"

Adjustable Tilted Body

00 -30 settings of adjustable tilted body are available.
Body is easily adjustable and its angles on the equipment can be nulled eliminating the need to replace engines or operator compilations.

Engine Capture Mechanism

The engine capture mechanism prevents the motor from being left in the bore hole in the event of failure of motor connection.

Bearing Assembly

Each motor is specially designed with thrust mechanism from radial support loading and radial bearings. A small percentage of drilling fluids (5% -7%) is pushed through the bearings to cool and lubricate the radial bearings. The remaining drilling fluid exits the nozzle connection points of the drill.

Power Unit

The power unit provides a unique looping power, produces torque and power to the header. Gyre at the leak-proof section. Speed increases up to amount of loops.

BORING SYSTEM

Boring method is the process of sliding steel pipes between the diameters of 300 mm and 1500 mm by means of a horizontal drill. With this method, all kinds of motorways, roads and railways passes are achieved.

SYSTEM PROCEDURE

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With the determination of entry points and performing necessary topographic measurements and field works along the line, a crossing line is created. Obstacles that may occur during the shaft and tunnel excavation (existing infrastructures, water, telecommunication, sewerage, electric power transmission networks) are controlled and the necessary elevations are determined and the crossing elevation is determined.

After earth-moving of the shaft place, molds are installed, reinforcements are prepared, back concrete and base concrete are poured according to the dimensions of the machine to be utilized, dimension of pipe diameter and at the dimensions of crossing elevation prepared for the project (approximately 12.00 m in length and 4.00 m in width). If necessary, side shear walls are built. Curtain walls do not contribute to horizontal drilling, unless there is a risk to work safety.

Machine travel rails are lowered into the chimney with suitable crane and placed on the base concrete. The travel rails are adjusted according to the drilling axis. The center axis of the rail works with the drilling axis.

Appropriate helix is placed inside steel pipe with 6 m in length with adequate thickness (minimum 1% of the diameter, at least 12 mm thickness for a 1000 mm pipe). The pipe is safely lifted and lowered into the chimney by the crane, determining the balance point with helix. The connection socket of the helix is inserted into the machine's slewing slot. Fixing pin and cotter pin are attached. After the helix is connected to the machine, the pipe to be driven is based on the machine's pusher buffer. The end of the pipe is driven to the starting point of drilling using the pushing mechanism of the machine and drilling bit is placed at the starting point. The drilling process is started.

After the helix has gone to its end, the rotation is stopped. The machine is retracted to the length of the pipe and the other pipe, which has a helix in it, is lowered. The process continues until the end of the line. During this period, the direction and training checks are made by entering the pipe in certain intervals and the line is completed.

We do not recognize the obstacles in Spiral Horizontal Boring

with Steel Pipe Sliding Process

REFERENCES

" WE HAVE A SIGNATURE UNDER
THE STRENGTHENING INFRASTRUCTURE OF CITIES"

ELECTRICITY / NATURAL GAS / DRINKING WATER / SEWERAGE

TANAP
TurkStream
DEMİRCAN
SAMGAZ
AKMERCAN Delta Doğalgaz
Enerya
aras
TEİAŞ
ayedaş
SAN-İŞ
ÖZALTIN
sedaş
TOKAT ELEKTRİK
TOROS
TOROS TARIM
TURKCELL
GEPOSB
ENERJİSA
Gediz Elektrik Dağıtım A.Ş.
Türk Telekom
SelÇukGAZ
ŞİŞECAM
PSİ
ZRD MÜHENDİSLİK ENGINEERING
ZORLU
UDAŞ
AGDAŞ
TURKCELL SUPERONLINE
KAYSERİGAZ
yılmazelektrik
İZMİRGAZ
inpema
işba
İLLER BANKASI
kcetaş
KASKİ
ENERVİS
KIRIGAZ
Punj Lloyd
Limak
kalyon
İSKİ
İGDAŞ
AKEDAŞ
STFA
KOLİN
EMTA
PETRONAS
POLİMEKS
KarGaz
BOTAŞ

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We are justifiably proud of finishing the **GIANT PROJECTS at home and abroad ...**

TANAP	**TANAP -** KEŞAN / EDİRNE LOT 4
STFA	**STFA - ENERYA** (ANTALYA-AKSARAY-AYDIN-DENİZLİ-EREĞLİ-ERZİNCAN KARAMAN-KONYA-NEVŞEHİR-NİĞDE) REGION CONTRACTS OF VARIOUS WORKS
POLİMEKSHOLDİNG	**TURKMENISTAN** AŞKABAT AIRPORT
	İSTANBUL 3RD AIRPORT – NORTHERN MARMARA HIGHWAY
İGDAŞ "Gökyüzüyle Arkadaş"	**VIAPORT TEM EXPRESSWAY PASSAGE** - İSTANBUL
BOTAŞ	**ALİAĞA LNG TERMINAL –** NATURAL GAS 36" HIGH PRESSURE BOTAS PIPELINE BETWEEN ALİAĞA RMS-A
TurkStream	**Turkish Stream Land Section-1 –** Natural Gas Pipeline - Tekirdag
PETRONAS	**DİCLE RIVER UNDER OIL PIPELINE -** BASRA / IRAQ

TRUST IN THIS POWER..!

We have fully equipped infrastructure with
Trenchless Directional Horizontal Drilling, Boring and Mud Motor technologies.

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