



TheoDist® Series

FTD 05 / FTD 02

Compact Total Station



geo-FENNEL TheoDist®

Compact Total Stations

The geo-FENNEL TheoDist® Series is an instrument designed to be easy to use and quick to set up on any construction site. Inexperienced users and professionals alike will benefit from the menu driven software with its intuitive structure and function keys improving productivity and saving valuable time.

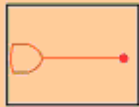
The principle features of the geo-FENNEL TheoDist®

- Measuring programmes that provide efficient and easy solutions for setting out.
- Reflectorless measurement makes inaccessible target positioning a thing of the past.
- Three-dimensional measurement of coordinates.
- Menu driven software with intuitive structure to maximise productivity.
- A visible laser pointer to improve targeting accuracy and allowing measurements to be taken without looking through the telescope.
- Data can be uploaded and downloaded to a PC via the RS232 connection.
- Quick and easy set-up with the integrated Laser Plummet.
- Measuring range of up to 200m (FTD 02: 300m) in the reflector less mode.
- Affordable price.

The geo-FENNEL TheoDist® Series is equipped with a variety of programs from simple distance and angle measurement up to precise three-dimensional setting out.

- Missing Line
- Offset
- Area
- Remote elevation measurement
- Resection
- Integrated application programmes for setting out office generated designs.

The communication software supplied with the geo-FENNEL TheoDist® allows the user to save the data in various formats. The data files can be converted into DXF format making them suitable to be uploaded into CAD Software such as AutoCAD.



Laser Pointer

A visible laser pointer to improve targeting accuracy also allows measurements to be taken without looking through the telescope.



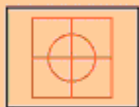
Reflectorless

Measurement to a variety of targets including reflectorless measurement with a range up to 200 meters (FTD 02: 300 meters) depending on the target quality and position in relation to the instrument.



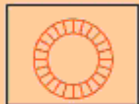
Prism

Can be used with any geodetic prism with a zero constant (FTD 05) or with any other prism constant (FTD 02).



RS

Reflective measuring tape and targets can be used for fixed positions, monitoring and reference points.



Absolute

A modern angular measuring encoder is based on an absolute coding system. This enables superb repeatability and measurements stability



Compensator

The electronic compensation system monitors the system levelling status and eliminates levelling errors.



Ni-Mh

Supplied with 2 NiMH battery packs with more than enough power for a full days work.



Memory

Internal memory for data storage of 50.000 points which can be saved in various data files. The FTD 02 has the option to store measurements on a SD-Card or also in the internal memory.



Keyboard

Two keyboards with large easy-to-read displays. Alphanumeric, user defined and function keys.



Laser Plummet

Integrated laser plummet for quick and easy setting up over a ground point.



Heavy Duty

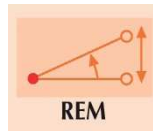
Compact and solid design to ensure stability.

Integrated Application Programs



Coordinate

Measuring and working in a three dimensional coordinate system.



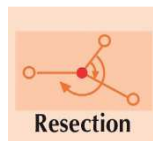
REM

Measure the height to an object by indirect measurement when a direct measurement is inaccessible.



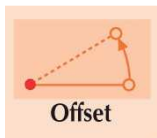
Missing Line

Calculation of the slope distance, horizontal distance and vertical height difference between two measured points



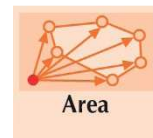
Resection

Determines the coordinates of the instrument by measuring multiple known points. The instrument can determine its position from a minimum of two to a maximum of 10 known points.



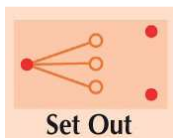
Offset

The offset by angle allows the user to capture a point by separating the distance and angle of a non-accessible point by positioning a prism in front, behind or perpendicular.



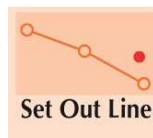
Area

The area can be calculated by measuring its perimeter with a minimum of three points.



Set Out

This function allows setting out coordinates in an area.



Set Out Line

Set out of points and lines with an offset to a defined baseline. Curves, arcs and roads can be set out easily.

APPLICATION PROGRAMS	geo-FENNEL TheoDist® Series	
	FTD 05	FTD 02
Coordinate Measurement	●	●
Setting Out Points	●	●
Resection	●	●
Missing Line Measurement	●	●
Offset Point Measurement	●	●
Remote Elevation Measurement	●	●
Area Calculation	●	●
Angel Repetition	○	●
Setting Out Lines	○	●
Setting Out Arc	○	●
Setting Out Road	○	●

● = included

○ = not included

TECHNICAL DATA		
	FTD 05	FTD 02
Telescope		
Image	Erect	Erect
Objective aperture (EDM)	45 mm	45 mm
Magnification	30x	30x
Field of view	1° 30'	1° 30'
Resolving Power	4"	4"
Shortest focus distance	1,5 m	1,5 m
Distance measurement		
Reflectorless	1 to 200 m	1 to 300 m
Reflective tape target RS	1 to 600 m	1 to 600 m
Single Standard Prism 62 mm	1 to 600 m (prism constant must be 0)	1 to 5.000 m (with any prism constant)
Accuracy	3 mm + 2 ppm	2 mm + 2 ppm
Measuring time (fine / rapid / tracking)	1.5 s / 0.9 s / 0.3 s	1.8 s / 0.9 s / 0.3 s
Minimum reading	1 mm	1 mm
Distance units	m / ft	m / ft
Angle measurement		
Minimum reading resolution steps	1" / 5" / 10"	1" / 5" / 10"
Angle accuracy	5"	2"
Angle units	100% / 360° / 400gon	100% / 360° / 400gon
Compensator		
Type	Electronic	Electronic
Range	± 3°	± 3°
Laser Aiming Dot		
Laser classification	Class 3 R	Class 3 R
Laser plummet		
Accuracy	± 1 mm / 1,5 m	± 1 mm / 1,5 m
Laser classification	Class 2	Class 2
Display		
Dual LCD	4 lines, 24 characters mounted on both faces	8 lines, 18 characters mounted on both faces
Power		
Battery type	7,2 V DC	7,2 V DC
Output Voltage	Working duration 5 h	Working duration 5 h
Charger	100 V to 240 V	100 V to 240 V
Vial sensitivity		
Plate level vial	30" / 2 mm	30" / 2 mm
Circular vial	8' / 2 mm	8' / 2 mm
Programs		
	Coordinate / Missing Line / REM / Resection / Offset / Area	Coordinate / Missing Line / REM / Resection / Offset / Area / Set Out / Set Out lines / Set Out Curves
General specs		
Internal memory capacity	50.000 points	50.000 points
External memory	-	SD-Card
Weight:	6,0 kg	6,5 kg
Operating temperature	-20°C to +50°C	-20°C to +55°C
IP-Class	IPX4	IPX4
I/O-Port	RS-232	RS-232
Supplied with		
Charger, 2 rechargeable batteries, Serial-Cable, Software, RS 96 Stake Out System, Case		

Subject to change without prior notice

Additional Accessories

Please refer to our general catalogue for full descriptions

Prism Poles



Prisms and Mini Prism Sets



Tribrachs



Tribrach Adapter



Tripods



Two-Way Radio



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