

TheoDist® FTD 05 / FTD 02

Reflectorless Total stations



» FTD 05



» FTD 02

» The geo-FENNEL TheoDist® is designed to be user-friendly and quick to set up on any construction site. Easy to handle, robust, exact and reliable.

» The main features of the geo-FENNEL TheoDist® are:

- Measuring programs that provide efficient and easy solution for setting out
- 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 RS-232 connection or SD-Card (FTD 02)
- Measuring range of up to 300m (FTD 05: 200m) without reflector
- Quick and easy set-up with the integrated laser plummet

» 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
- Remote elevation measurement
- Resection
- Integrated application programs for setting out office generated designs.
- Area

» 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®.



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TECHNICAL DATA	FTD 05	FTD 02
	ART-NO. 700000	ART-NO. 700200
Telescope		
Image	Erect	Erect
Objective aperture	45 mm	45 mm
Magnification	30 x	30 x
Field of view	1° 30'	1° 30'
Resolving power	4"	4"
Shortest focus distance	1.5 m	1.5 m
Distance measurement		
Reflectorless	200 m	300 m
Reflective tape target	600 m	600 m
Single standard Prism	600 m	5.000 m
Accuracy	3 mm + 2 ppm	2 mm + 2 ppm
Offset	"0"	variable
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	1" / 5" / 10"	1" / 5" / 10"
Angle accuracy	5"	2"
Angle units	100 % / 360° / 400 gon	100 % / 360° / 400 gon
Compensator		
Type	electronic	electronic
Range	± 3°	± 3°
Laser pointer		
Laser classification	3R	3R
Laser plummet		
Accuracy	± 1 mm / 1,5 m	± 1 mm / 1,5 m
Laser classification	2	2
Display		
Dual LCD	4 Lines, 24 Characters	8 Lines, 18 Characters
Power		
Rechargeable battery type	7.2 V DC NiMH	7.2 V DC NiMH
Operating time	5 h	5 h
Charger	100 / 240 V	100 / 240 V
Vial sensitivity		
Plate level vial	30" / 2 mm	30" / 2 mm
Circular vial	8' / 2 mm	8' / 2 mm
General specs		
Internal memory	50.000 Points	50.000 Points
External memory	-/	SD-Card
Weight	6.0 kg	6.5 kg
Operating temperature	-20 °C – +50 °C	-20 °C – +50 °C
IP-Class	IPX4	IPX4
I/O-Port	RS-232	RS-232

	FEATURES	FEATURES
1	Clearly visible display with all functions FTD 05	
2	RS-232 data connection for universal use of FTD 05	
3	Complete kit supplied FTD 05	
4	Clearly visible display with all functions FTD 02	
5	SD Card FTD 02	
6	Complete kit supplied FTD 02	
	<ul style="list-style-type: none"> Coordinate measuring Setting out points Resection Missing line measurement Offset point Remote elevation measurement Area calculation 	<ul style="list-style-type: none"> Coordinate measuring Setting out points Resection Missing line measurement Offset point Remote elevation measurement Area calculation Angle repetition Set out line Set out curve Set out road
	SUPPLIED WITH	SUPPLIED WITH
	Charger, 2 rechargeable batteries, serialcable, software, RS 96 Stake Out Aid, container	Charger, 2 rechargeable batteries, serialcable, software, RS 96 Stake Out Aid, SD-Card, container

Total Station FTS 102

Compact and robust

- » The geo-FENNEL Total Station FTS 102 is smart in its design and really easy to handle. It comes with the Windows CE based application software MicroSurvey FieldGenius or Carlson SurvCE optionally.



- 1 Easy handling
- 2 Touch pen quickly accessible



- » Its touchscreen display greatly improves the workflow of accessing menus and software modes quickly and reliably. The FTS 102 features a full alphanumeric keypad as well as a “pop-up” keyboard which both ensure fast and accurate entering of data.

In addition to the already supplied applications the FTS 102's software package also supports road planing, volume calculation and simple CAD options to make the work in the field much easier. Measurements can be easily transferred into different formats to or from existing softwares like AutoCAD and similar. Due to its usability it is easily possible to measure and check points, stake-out lines, single points as well as setting up the instrument fastly and accurately.

All features are smartly integrated in a compact and well designed instrument: Fast and long range EDM allows for measurements up to 3.500 m with standard prism and reflectorless up to 500 m. An integrated laser plummet allows a quick and accurate setup over measuring points also under difficult conditions. All total stations are equipped with the RS 96 stake out-aid from RS-Systems for fast and secure stake-outs. The FTS 102 measurements can be transferred by standard RS-232 cable but also by Bluetooth® or USB stick. Its two rechargeable Li-Ion batteries allow the use of the FTS 102 for even longer than one working day. All its connectors are well protected against dust and water which results in IP 55.



TECHNICAL DATA FTS 102 TECHNICAL DATA FTS 102

Objective			
Telescope		Laser plummet	
Image	Erect	Accuracy	± 0.5 mm / 1.5 m
Objective aperture	45 mm	Laser class	2
Magnification	30 x		
Field of view	1° 30'	Power supply	
Resolving power	3"	Li-Ion battery	4400 mAh
Shortest focus distance	1.0 m	Operating time	8 h
Operation		Display	
Reflectorless	1 – 500 m	Dual TFT	3.5" colour display
Reflective tape target	1 – 800 m	Backlight	yes
Mini Prism	1 – 1200 m	Keyboard	26 Keys
Single standard prism	1 – 3500 m		
Accuracy	± 2 mm + 2 ppm	Data process	
		CPU / clock frequency	2 GB / 528 MHz
Angle measurement		OS	Windows CE 5.0
Minimum reading resolution	1" / 5"	Application software	SurvCE / FieldGenius
Angle accuracy	2"	I/F	RS-232C, Bluetooth®, USB
Angle units	100 % / 360° / 400 gon		
		Other	
Compensator		IP class	IP 55
Axis	2 axis	Operating temperature	- 20 °C – 50 °C
Range	± 3°	Dimensions	183 x 342 x 167 mm
		Weight	5.4 kg
Vial sensitivity			
Plate level vial	30" / 2 mm		
Circular vial	8' / 2 mm		

FEATURES		SUPPLIED WITH	
<ul style="list-style-type: none"> · Easy-to-use on-board software · Easy-to-read display also in direct sunlight · Fast import and export of different data formats without an additional software 	<ul style="list-style-type: none"> · Fast and accurate measurements · Intensity of the laser plummet can be changed gradually · Compact and smart design 	<p>ART.-NO. 710000</p> <ul style="list-style-type: none"> · Desktop charger · 2 x Li-Ion battery · Data cable · Container · Stake-out aid RS 96 	<ul style="list-style-type: none"> 3 Protected connection ports 4 What's in the kit 5 Clear display 6 Simple system set up