



www.dtco.vdo.com

DTCO[®] 2.0 – efficient, secure and reliable

The digital tachograph from VDO



ITS ready
Intelligent Transportation Systems

VDO



VDO Counter – Your intelligent driving and rest time calculator

With the DTCO® 2.0 VDO has launched an intelligent calculator onto the market which calculates remaining driving and rest times in real time and displays this information directly to the driver on the DTCO®. When using optional equipment such as the VDO® SmartLink, you can also retrieve VDO Counter data on your smartphone. This is why VDO sets new standards in terms of convenience, security and efficiency.





As simple as that – VDO Counter functions

Your drivers no longer need to write down and tediously calculate their times. This is now done fully automatically by the optional VDO Counter function available with the DTCO® 2.0.

The VDO Counter not only reliably calculates driving and rest times per shift but also for the week or two weeks. And it informs the

driver of upcoming changes of activity and their duration even while driving.

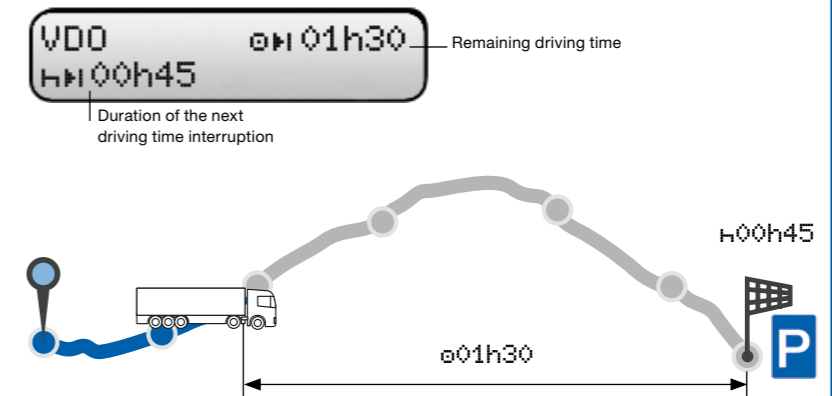
Benefits of the VDO Counter:

- Your drivers can **plan routes and stops as efficiently as possible and react to changing traffic conditions quickly**. If they know their current driving and rest times, they can exploit the legal provisions in the best possible way.
- Your drivers can now make **good use** of their **valuable working time** which is no longer taken up by recording activities.
- VDO Counter information can also be retrieved with your smartphone. You will thus always know your driver's remaining amount of driving time and can optimise your **resource planning**.
- With the VDO Counter legally prescribed driving and rest times can be easily adhered to and **finances can be avoided**.

The VDO Counter (from Rel. 2.0) computes driving times and rest periods on the basis of the Drivers Hours Regulations (EU) 561/2006 with the exception of regulation ferry/train. Country-specific social directives for driving times and rest periods as well as country-specific regulations related to working time are not taken into account. The device makes no claim to a legal interpretation. If applicable, this must be made by the driver himself.

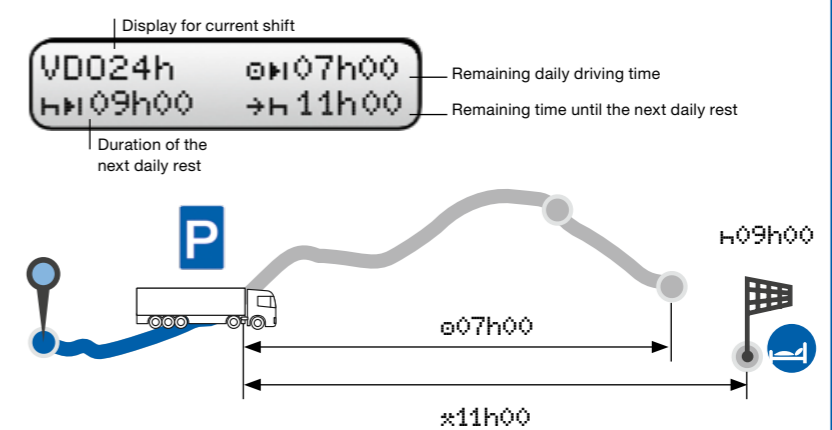
Display of current driving and rest times

Whether at motorway service areas, in the yard or while driving – your drivers will always know their remaining driving times and when to stop for a break.



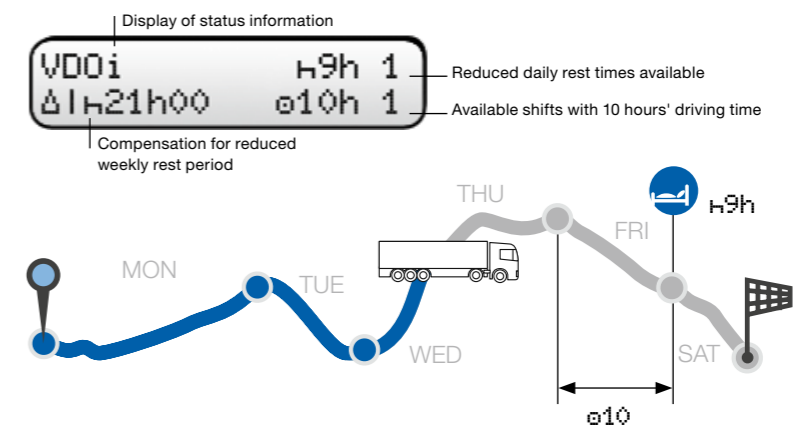
Display for current shift and week

Your drivers can easily retrieve their driving and rest times for the current shift or week.



Display of status information

Status information provides your drivers with a quick overview of available reduced daily rest times, extended driving times and upcoming compensation times.



Efficient, reliable and convenient – DTCO® 2.0 by VDO

As part of our policy to cater fully for the requirements of our users and respond quickly to legal and technical changes, we constantly research the market to ascertain the experiences and needs of existing and potential customers – and we act upon what we have learnt by constantly implementing new functions.

Additional functions of the DTCO® 2.0 at a glance

- You will gain valuable driving time thanks to calculations based on the **“one-minute rule”**. This will help you to run your business more smoothly and increase your fleet’s **competitiveness**.
- Printouts cannot only be created in UTC time but also **in local time** and enable the driver **to carry out checks easily and conveniently**.
- **Well prepared for the future** – the DTCO® 2.0 receives a **second, independent motion signal** prescribed by law from October 2012. This signal is then compared with the signal sent by the speed sensor.
- The **subsequent easy entry of manual data** (in local time) **increases the efficiency** of your daily fleet management tasks.





Driving time calculation based on the “one-minute rule”

In line with Regulation (EU) No. 1266/2009, the DTCO® 2.0 only records a tachograph minute as driving time if driving is the longest activity during this minute.

Your benefits from the “one-minute rule”

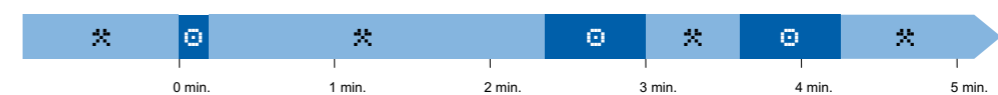
Implement the “one-minute rule” and **save valuable driving time** in distribution traffic and traffic jams, at customs control and during manoeuvres at the loading ramp.

This actually means that with the DTCO® 2.0 you will considerably extend driving

times depending on the number of daily stops. Experience has shown that balance sheets reflect these savings in the form of profit. From a purely mathematical point of view especially large fleets could even save vehicles. Work it out for yourself!

Sample calculation with three stops in five minutes:

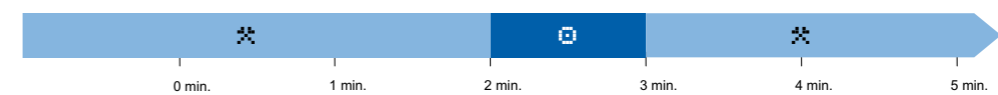
Actual driving time: 00:01:30



Old driving time calculation: 00:05:00

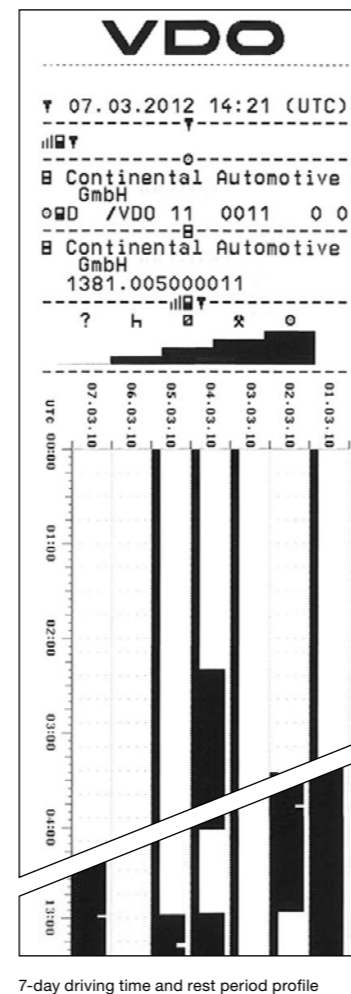
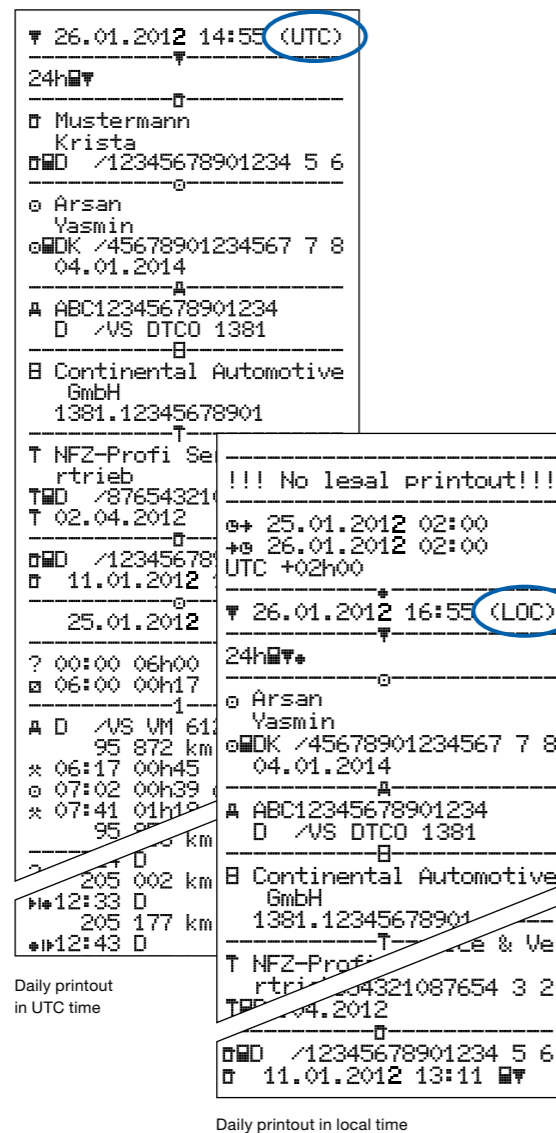


New driving time calculation: 00:01:00



Printouts in UTC or local time

The new DTCO® 2.0 can create all printouts both in UTC and local time. Even the graphical printouts covering the speed profile of the last 24 hours and the driving and rest times of the last seven days are now available in local time. Your drivers no longer need to convert the details into local time and you can see all the important information at a glance.



Secure and stress free – wireless data transfer

One especially convenient function the DTCO® offers you is the quick, cost-cutting wireless transfer of mass memory and driver card data by means of the Download Device (DLD®).

One major advantage of wireless transmission is that the download process is controlled from the office computer, which means that the company card required for this can stay in the office. Driver and vehicle data can then be downloaded in compliance with the legal deadlines for downloading and transferred directly to the archive. This means that you can access fleet-related data whenever you want. And you will benefit from optimised processes and considerably lower administration costs.

The professional fleet management solutions TIS-Web®, TIS Track&Trace, VDO DriveTime and OmniExpress, supplementing the DLD®

Wide Range, not only enable you to view the transferred tachograph and positioning data online wherever and whenever you wish but also to optimise your company operations significantly.

All you need is an update card to activate the DTCO® front interface for wireless transmission. The chip card only has to be inserted once into the DTCO® – the update will then be carried out automatically.

You'll find more detailed product information about DLD®, TIS-Web®, TIS Track&Trace, VDO DriveTime and Fleet Visor™ at: www.dtco.vdo.com/downloads

Tried and tested

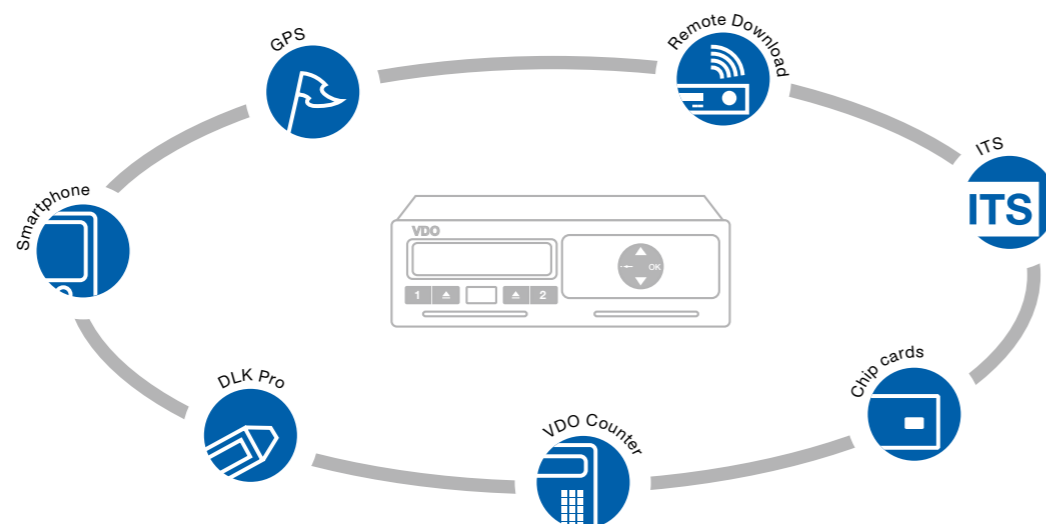
VDO has been a market leader in the tachograph business for many years and introduced the market's first digital tachograph in May 2006. Based on the company's many years of experience, the DTCO® is a mature device that sets new standards in terms of performance, innovation, user friendliness and data security.

Components and interfaces of the DTCO® 1381 in 1-DIN radio format

- Registration unit incl. mass memory
- Two fully automatic chip card readers
- Integrated printer for printing out legally prescribed reports, graphical speed profiles, status and activity protocols
- Display for showing essential information, e.g. the current driving time and rest period account
- Front design in accordance with ECE R21
- Real-time clock based on UTC (universal time coordinated)
- Optimised menu navigation and user guidance
- Interface at the front for testing/diagnosis, calibration and downloading of the mass memory data
- CAN interface for connection to the onboard electronics
- Interface for connecting an instrument cluster/electronic speedometer
- Info interface for connecting to onboard computers and telematic systems

High data security because card has different access privileges

- Driver cards save driver activities, events, faults and vehicle changes.
- The company card authorises fleet managers to download vehicle data from the mass memory and driver data from inserted driver cards.
- The control card enables authorities to access data for legal purposes.
- The workshop card switches on the calibration function of the DTCO®. Authorised workshops can also use it as a driver card for testing and inspection purposes.



DTCO® 2.0 in more detail

Operation and functions	
29 AETR languages available (depending on the data on the inserted driver card, automatic language selection occurs – but this can be manually overwritten)	●
Display available in divers colours	●
Dimming function for display illumination and button lighting	●
Navigation button and printer drawer panel can be replaced	●
Two fully automatic chip card readers for different tachograph cards	●
Simple paper replacement – no tiresome feeding in	●
Business-friendly driving time calculation in line with the "one-minute rule" (Regulation (EU) No. 1266/2009)	●
Optimised user guidance with menu text	●
Fast recording of subsequent manual entries	●
Automatic driver warning after 4 hours and 15 minutes of driving time (Regulation (EC) No. 561/2006)	●
Recording and printing of speed/rpm profiles	●
Driver 1 and Driver 2 activities are printable (graphics)	●
Status inputs D1/D2 printable as a bar graph	●
Printouts of all vehicle and driver data	●
Recording of additional data (e.g. 168 hours speed data recording, odometer reading when vehicle stops)	●
Early warnings (advance warnings about periodic inspections and expiry of tachograph cards)	●
Fast download	●
Download status shown on display	●
Calculation and display of driving times and rest periods in real time (VDO Counter)	○
Interfaces	
2 CAN interfaces for onboard electronics and a second, independent speed signal	●
CAN interface for Download Device (DLD®)	○
Interface for intelligent sensor (KITAS)	●
Signal output (v-pulse, 4 pulses/m)	●
Diagnostics interface CAN or K-Line	●
Info interface for onboard computers or other telematics systems	●
6-pin interface for programming, calibration and data download via Downloadkey	●
6-pin interface for data transfer by wireless	○
Suitable solutions for direct data download	
DLK Pro Download Key	●
Download Device (DLD® Short Range and DLD® Wide Range)	○
DLK Pro TIS-Compact	●
DTCO® GeoLoc	●
OmniExpress	●
Technical data	
Installation dimensions: 178 x 50 x 150 mm (l x w x h), 1-DIN radio slot format	Operating voltage: 24 V (optional 12 V)
Measuring range: 0 to 220 km/h	Operating temperature: -25 °C to +70 °C
Storage temperature: -40 °C to +85 °C	Pulse range: 4,000 to 25,000 pulses/km
Real-time clock based on UTC time	Inputs: KITAS 2+ 2171, n-sensor, additional inputs
Outputs: 2 x v-pulse, 1 x 4 pulses/m	Accuracy: Speed: ± 1 km/h, distance: ± 1 %, time: ± 2 s/day
Weight approx. 1,050 g	

● Standard function
○ Optional function (availability depends on DTCO® version)

Note: A DTCO® ADR version is also available for dangerous goods vehicles.

Tailor-made solutions for the DTCO®







VDO offers you various integrated solutions for fleets, workshops and authorities, tailored to meet different requirements.

In addition to a multitude of specific download and storage media, all optimised for various company structures and working procedures, flexible fleet solutions are available for archiving, displaying, checking and evaluating data, from legally prescribed archiving and comprehensive data and fleet management to professional telematics.

VDO provides workshops and authorities with a wide range of tools for calibrating and programming the digital tachograph and for checking mass memory and driver card data quickly and reliably.

You will find clearly arranged product information about VDO solutions at www.dtco.vdo.de/downloads



Our solution	Your requirement					
	Fleet manager					
	 Transferring tachograph and driver card data	 Archiving of tachograph and driver card data in compliance with the law	 Display and financial analysis of tachograph and driver card data	 Monitoring of legally required driving and rest times	 Vehicle location and route tracking	 Analysis of all fleet data for optimising work processes, personnel planning, etc.
Card Reader	—————▶					
Download-Terminal	—————▶					
DLKPro Download Key	—————▶					
DLD® Short Range + DLD® Wide Range	—————▶					
DLKPro TIS-Compact	—————▶					
TIS-Web® + DLD® Wide Range	—————▶					
TIS Track&Trace + TIS-Web® + DLD® Wide Range	—————▶					
VDO DriveTime + TIS-Web® + DLD® Wide Range	—————▶					



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A2C59515081 | Continental Automotive GmbH | English © 2012

Printed in Germany

