CONTEMPLAS

professional motion analysis software

# Sprint Start Analysis

*TEMPLO Sprint Start Analysis is a user-friendly and highly target orientated software for quick analysis of sprint start performance by using two force plates, which are integrated in regular starting blocks. An integrated database allows a comparison of performance with world-class athletes.*

## Purpose

- Research & teaching
- Performance analysis
- Feedback training
- Kinetic and kinematic documentation
- Demand to record and play back

## Software Philosophy

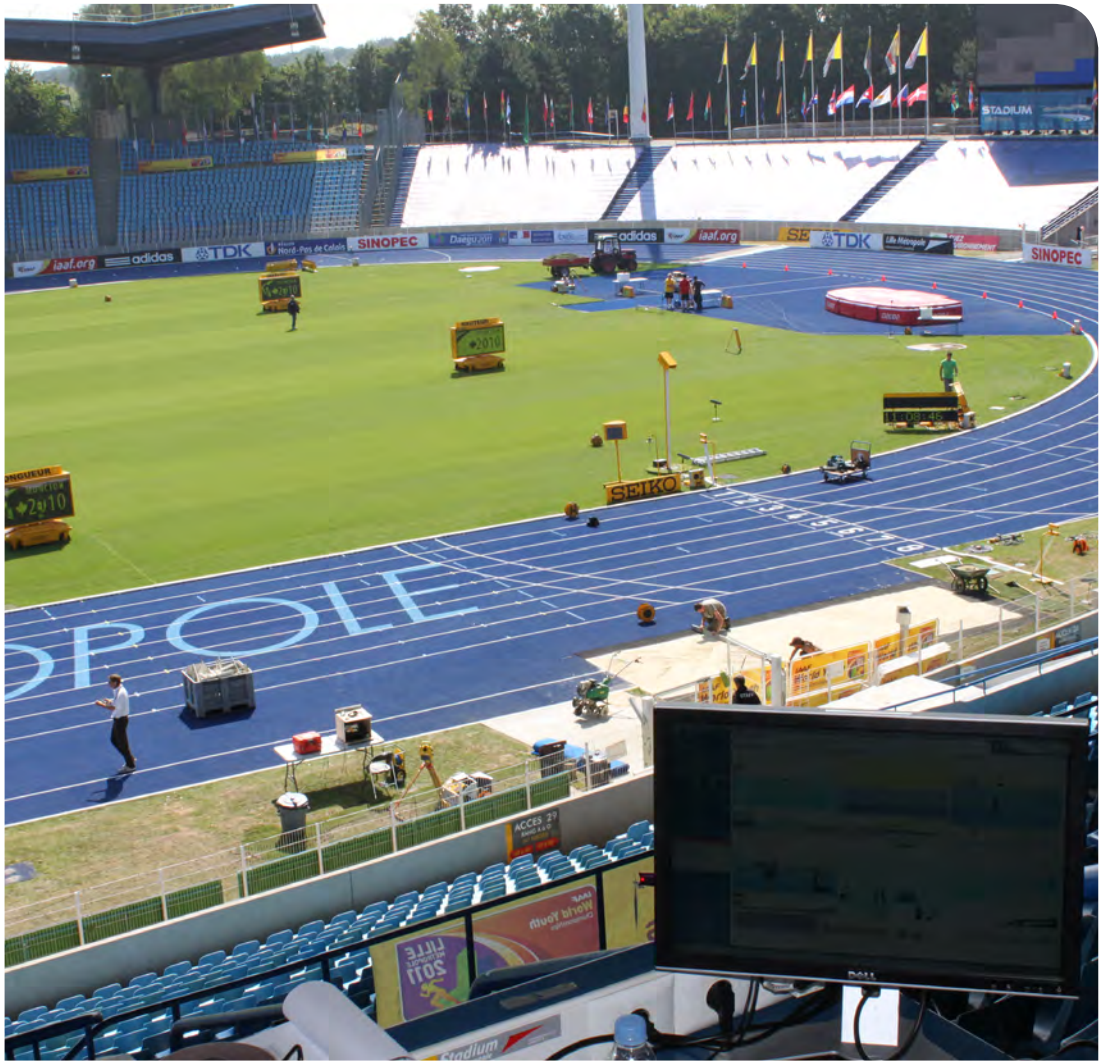
- Easy to use
- Instant live view
- Instant feedback
- Portability
- Serves coaches needs
- Integrated reference database
- Easy to read reports

## Markets

- Universities
- Olympic training centers
- Sport federations
- Sport clubs
- Track & Field
- Biomechanic labs

## Institute for Biomechanics and Orthopedics
Cologne (DE)

**TOP References**




### SETUP

- 2-camera-highspeed system (500x500@700fps)
- 2 light barries
- Portable PC

### PURPOSE

- Recording of reference videos and values
- Research on sprinting analysis
- Use for teaching with students

http://www.dshs-koeln.de/visitenkarte/einrichtung/biomechanik-und-orthopaedie

## ISBS 2015
### Workshop Sprint Start

### SETUP

- 2-camera-highspeed system, 2 light barriers
- Speaker for starting signal
- Highend PC

### PURPOSE

- Practical demonstration of usability in the field
- **Track & Field:** Running analysis of 100&200m:
  - cadence & step length
  - intermediate timing information
  - reference values of block parameters

## Reference list of sports analysis users

- German Sports University Cologne, Germany
- Sport Institute of Salzburg, Austria
- UFMG Belo Horizonte, Brazil
- Aspire Sports Excellence Center, Katar
- Australian Sport Commission, Australia
- Swimming Confederation NRW, Germany
- Olympic Training Center Berlin, Germany
- Football Association (FA), UK
- Olympic Training Center Sachsen-Anhalt, Germany
- George Washington University, USA
- ETH Zürich, Switzerland
- Hongkong Sport Institute, China
- Sportshub 2014, Signapore
- ITM University, Malysia
- Humboldt University Berlin, Germany
- Team Danmark, Denmark
- Chinese University of Hong Kong, China
- Leeds Beckett University, UK
- Sports Performance International, USA
- Singapore Sports Council, Signapore
- Cardiff University, UK
- Zinman College, Israel
- Marquette University, USA
- Texas Tech University, USA
- Olympic Training Center Stuttgart, Germany

***... many more***

## Focus on video recording & feedback

**Sprint Start Analysis**

+

**Cameras**

+


**Timing**

- Integrated "Starting automatic" with accustic signal
- Instant availability of results (diagrams and parameters)
- Instant comparison with reference database - containing the whole range of 100m sprinters' performance of men and women
- Immediate recommendation for training possible
- Slow-motion and analysis tools
- Database functionality (longitudinal analyses)
- Export of parameters

- Unlimited perspectives
- Up to 60fps
- Synchronized recording

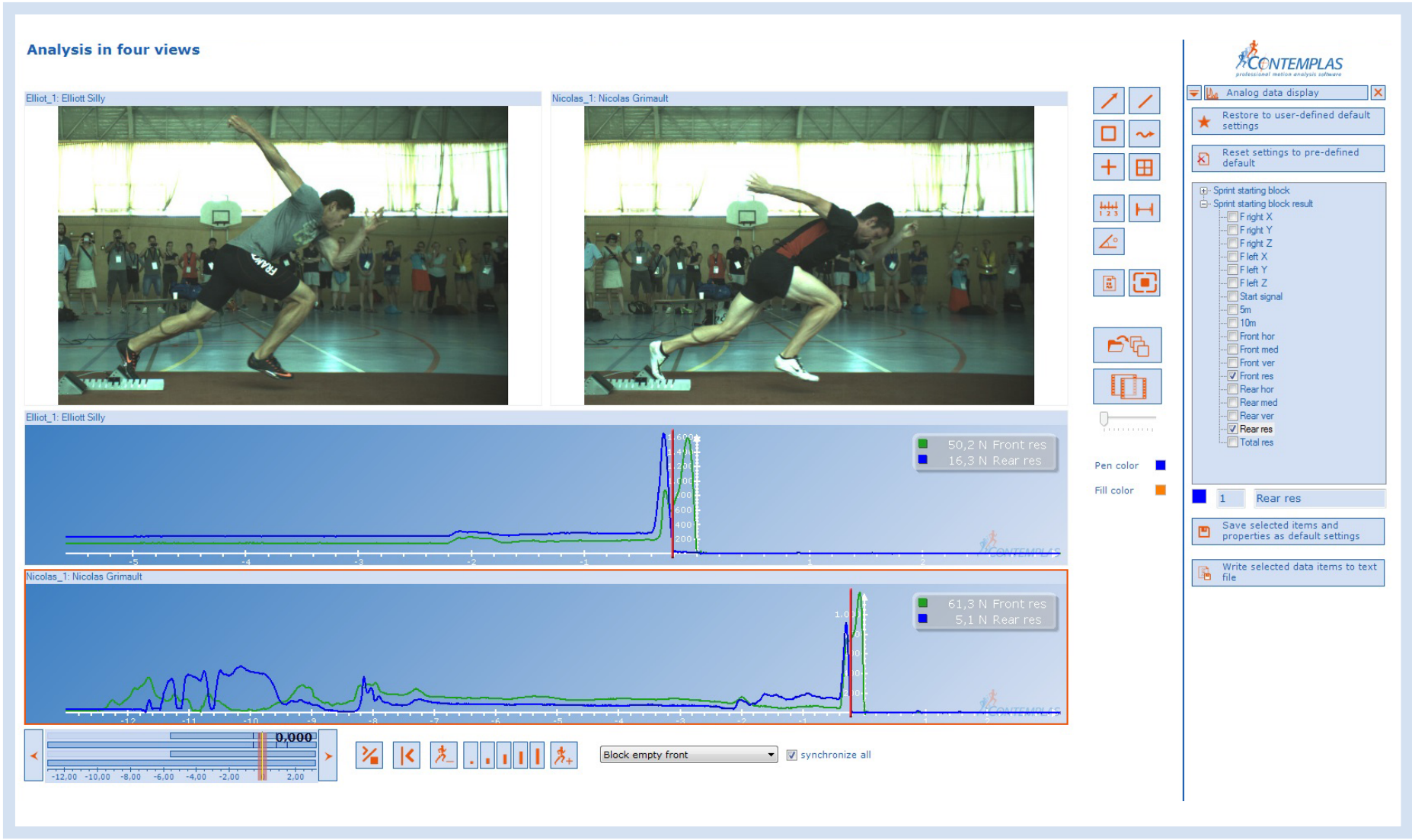
- Additional spatial-timing information
- Light barriers
- Optogait System

+ ***Highspeed***

- Set frame rate
- Set resolution an **A**rea **O**f **I**nterest
- Control all camera features in the software

+

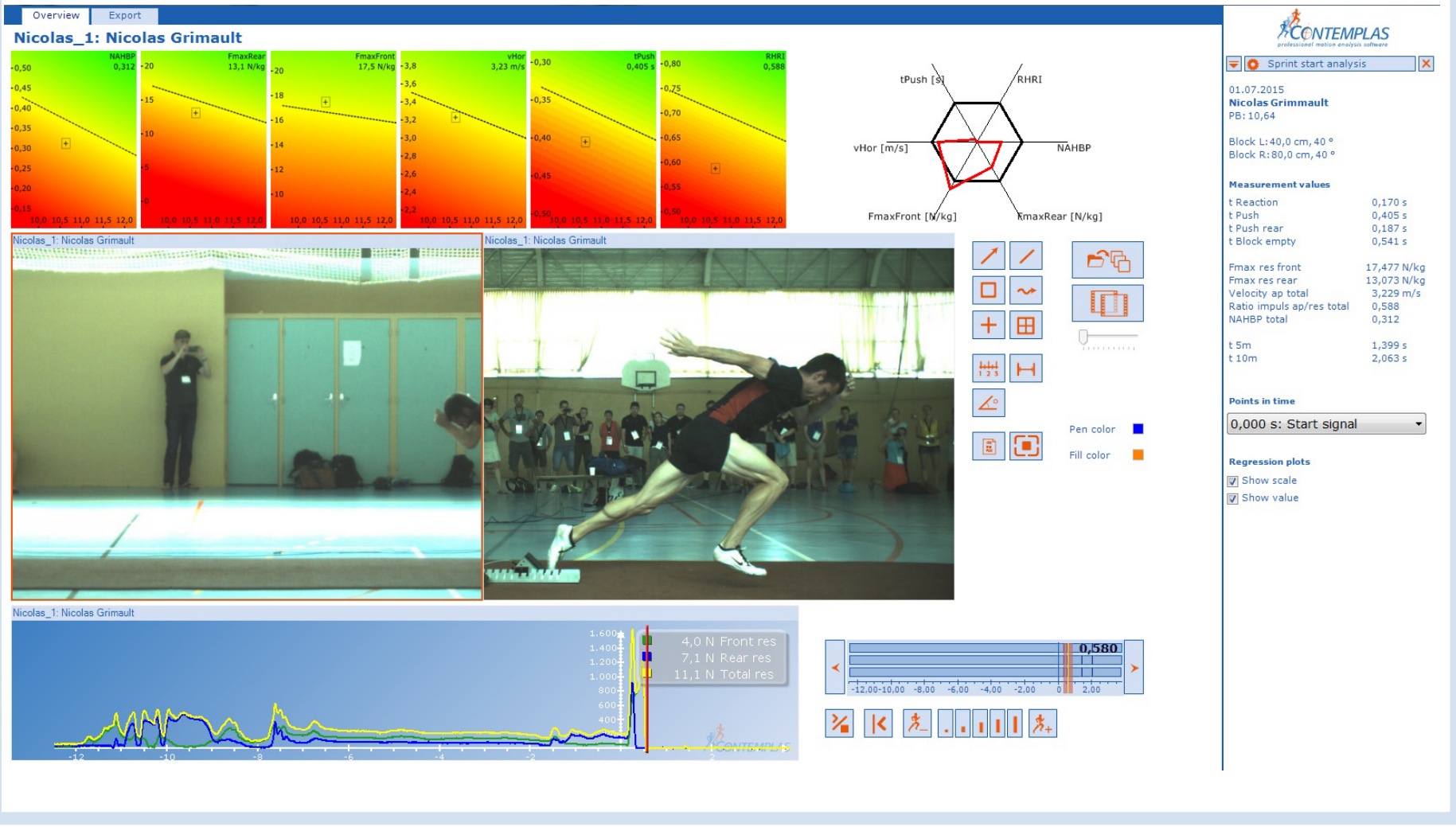
## Keyfeature: Comparison of different athletes



## Keyfeature: Overlay

## Keyfeature: Calculation of key-block parameters

VIDEO



## Hardware requirements

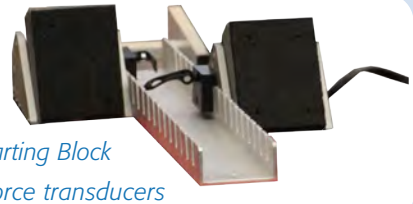
Sprint Start Block + Camera + Timing + EMG + Pressure

Cameras

USB3.0

GigE

Measurement Devices



CONTEMPLAS Starting Block
with integrated force transducers

MICROGATE
OMEGA
ALGE TIMING ELECTRONIC DEVICES

NORAXON EMG & Sensor Systems
myon SIMPLY WIRELESS
BTS Bioengineering

currex FOOTPLATE
SENSOR medica
Tekscan
amcube www.amcube.com
RS scan
zebris
medilogic

Accessories

# CONTEMPLAS Starting Block System - Specification

## Dimensions

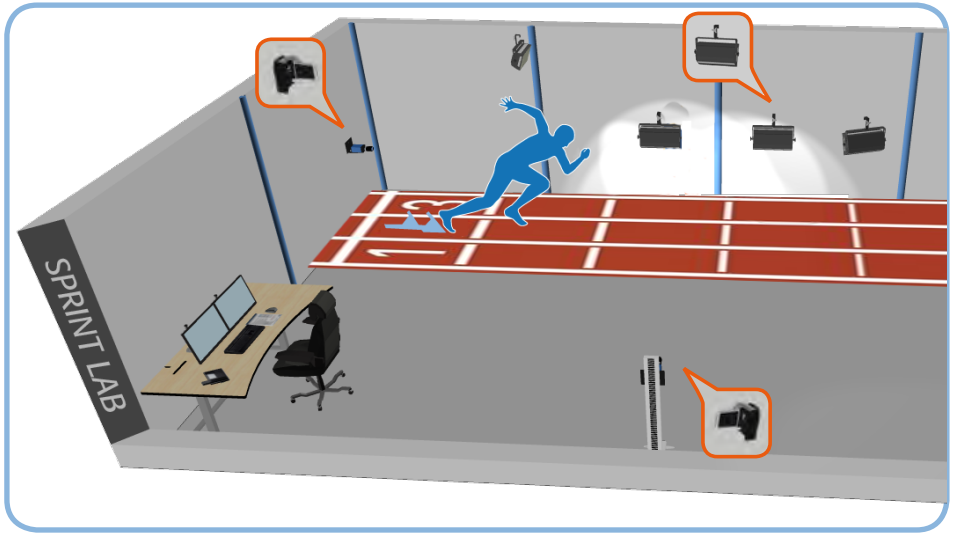
- Start block with independent front and rear block with 2 force plates
- Contact plate: 116 x125 mm
- Total load 6 kN per plate
- Strain gauge based
- Surface: Tartan, black
- Including A/D board and 10m cable
- Optional: Hardware synchronization kit for cameras and light barrier systems, etc.
- Optional: Robust transport case

## Purpose

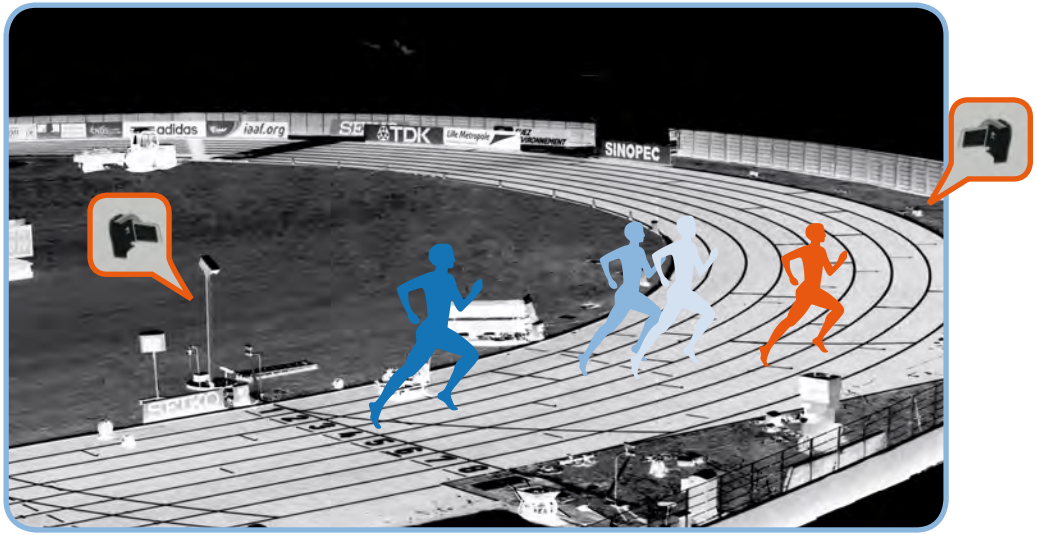
- Can be used for any kind of sports that involves sprinting
- Professional feedback training with references
- Can be combined with other measurement systems

## Space requirements

### Laboratory




### Field




***Camera***

***Ceiling lighting***

***Camera***

Details

***Distance >*** walkway: ***> 25 m***