



Movetrix F1-3D

3D Force Plate

MEASURE THE FORCES VERTICAL
PLATES CANNOT SEE.

Full 3D Forces and Moments. Live In Under 60 Seconds.



Two independent 3D force plates, Movetrix Studio software, AI analysis, and complete raw data—without permanent floor construction, a mandatory subscription or a traditional laboratory installation.

www.movetrix.com

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F1-3D · PILOT EDITION · 08-2026

F1-3D · 3D FORCE PLATES

Movetrix F1-3D

The **Movetrix F1-3D** is the world's most accessible 3D force plate system – a compact, ultra-thin, and intelligent platform that delivers lab-grade biomechanics without the complexity, size, or price of traditional systems.



ALL 6 COMPONENTS + COP

$F_x \cdot F_y \cdot F_z + M_x \cdot M_y \cdot M_z$ for Each Side

30 MM THIN

Ultra-low plate profile, for the places where testing happens.

ONE BOARD TO TEN

Combine up to 10 F1-3D boards, perfectly synchronized.

2,000 SAMPLES PER SECOND

Every Channel, Simultaneously.

€14,990

Complete Dual-System Pilot Price

Apply for One of the First 20 Systems:
[movetrix.com/founding-20](https://www.movetrix.com/founding-20) • contact@movetrix.com



F1-3D · WHY IT EXISTS

3D FORCE DATA, WHERE PEOPLE ACTUALLY MOVE

Traditional six-axis systems can require permanent construction, multiple hardware components, specialist operation and laboratory-sized budgets.

F1-3D takes a more practical route: place the boards, connect three cables and start measuring.



NO PIT. NO PERMANENT CONSTRUCTION.

30 mm floor-mounted boards for suitable flat surfaces — fits into standard gym floor.

HARDWARE AND SOFTWARE, BUILT AS ONE SYSTEM.

Boards, Force Data Terminal and Movetrics Studio work as one system.

A COMPLETE DUAL SYSTEM FOR €14,990.

Our dual pilot system starts at €14,990 plus VAT.



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F1-3D · APPLIED USE

BUILT FOR THE WORK BETWEEN THE LAB AND THE REAL WORLD.

F1-3D is built for the work between a controlled laboratory and the places where athletes, students and research participants actually move.



SPORTS — SEE HOW ATHLETES PRODUCE, ABSORB AND REDIRECT FORCE.

Jump and landing analysis · starting and change-of-direction mechanics · force-vector behaviour · repeated-measurement monitoring.

APPLIED RESEARCH — DESIGN THE PROTOCOL. KEEP EVERY DATA POINT.

Synchronized multi-axis measurement · protocol development · force-time investigation · raw-data analysis and CSV workflows.

REHABILITATION — TRACK FORCE, LOADING AND COP

Non-diagnostic measurement for observing force, loading and center-of-pressure behaviour within a practitioner-led process.

UNIVERSITIES & EDUCATION — LET STUDENTS WORK WITH REAL SIX-AXIS DATA.

A compact six-axis system for practical teaching, laboratory courses and student research.



F1-3D · THE COMPLETE SYSTEM

THREE COMPONENTS. THREE CABLES. ONE COMPLETE 3D WORKFLOW.

F1-3D FORCE BOARDS

Each 600 × 350 × 30 mm board measures three forces and three moments. Use one board, two side by side, or a supported multi-board layout.

FORCE DATA TERMINAL

The FDT links the board chain to the computer and provides analog and synchronization interfaces for the wider measurement setup.

MOVETRICS STUDIO

Configure the layout, acquire live data, review the result and produce reports or raw/CSV exports in the included Movetrix Studio Windows software.



Note: Image is for illustrative purposes only and does not represent actual product dimensions.

CONNECT ONCE. REPEAT IN UNDER 60 SECONDS.

- 01** Place the boards on a suitable flat surface.
- 02** Connect the boards with one Ethernet cable.
- 03** Connect the board chain to the FDT with one Ethernet cable.
- 04** Connect the FDT to the PC by USB-C, then start Movetrix Studio.

SAVED SETUP TO LIVE DATA: UNDER 60 SECONDS.

Initial layout configuration typically requires an additional one to two minutes.



F1-3D · SIX-AXIS MEASUREMENT

VERTICAL FORCE IS ONE COMPONENT. F1-3D MEASURES ALL SIX.

Measure how external force builds, changes direction and creates moments throughout the task—instead of reducing the movement to Fz alone.

THREE FORCE COMPONENTS

Fx - fore-aft force

Fy - side-to-side force

Fz - vertical force

THREE MOMENT COMPONENTS

Mx - moment about the x-axis

My - moment about the y-axis

Mz - moment about the z-axis



CAPTURE FAST EVENTS AT 2,000 SAMPLES/S PER CHANNEL.

Simultaneous acquisition for fast force-time events.

SIMULTANEOUS SIX-AXIS ACQUISITION FROM EACH BOARD.

A direct, high-resolution digital measurement chain.

12,000 N SAFE VERTICAL LOAD PER BOARD.

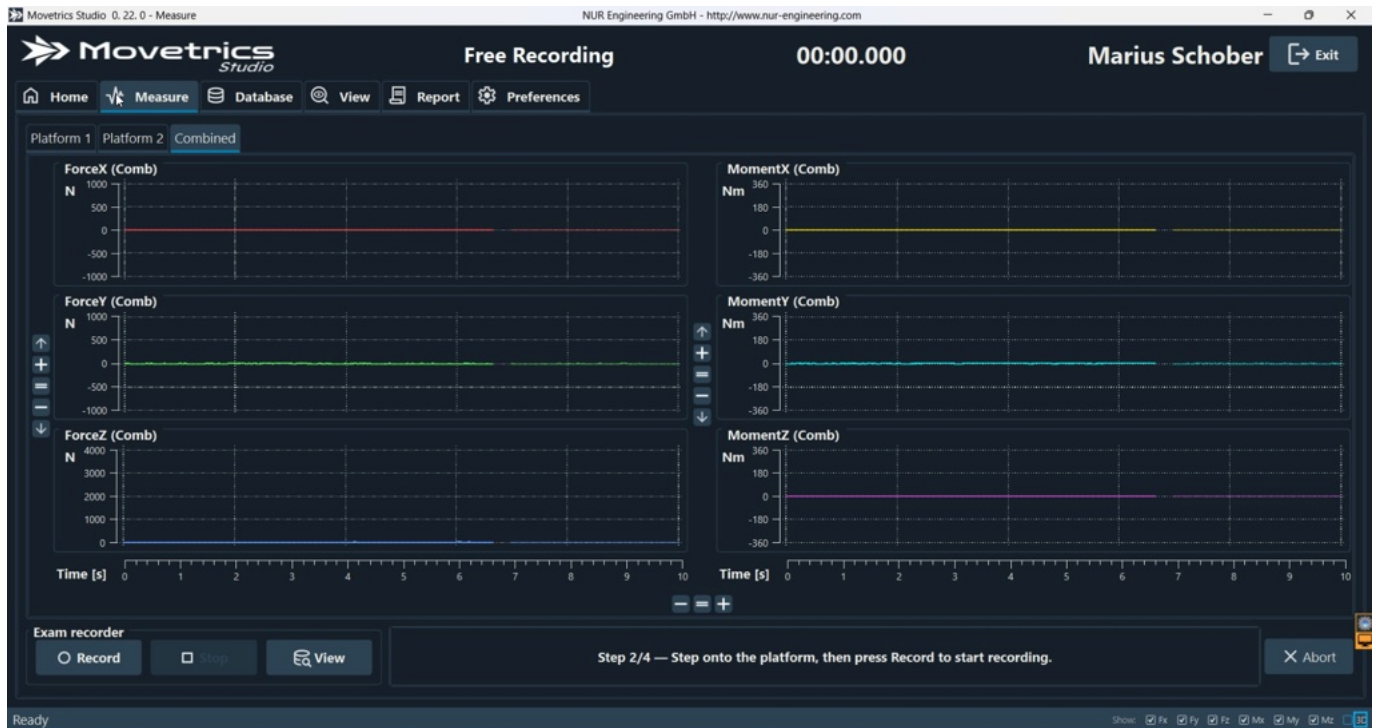
24,000 N across a standard dual system.



FI-3D · MOVETRICS STUDIO

MEASURE. VIEW. REPORT. REPEAT.

One environment carries the measurement from layout to evidence.



01 CONFIGURE

Select the board layout and protocol.

02 MEASURE

Record synchronized six-axis data.

03 REVIEW

Inspect signals, phases, channels and CoP.

04 REPORT

Generate the applicable Studio or AI-assisted report. Generate the applicable Studio or AI-assisted report. Generate the applicable Studio or AI-assisted report.

05 EXPORT

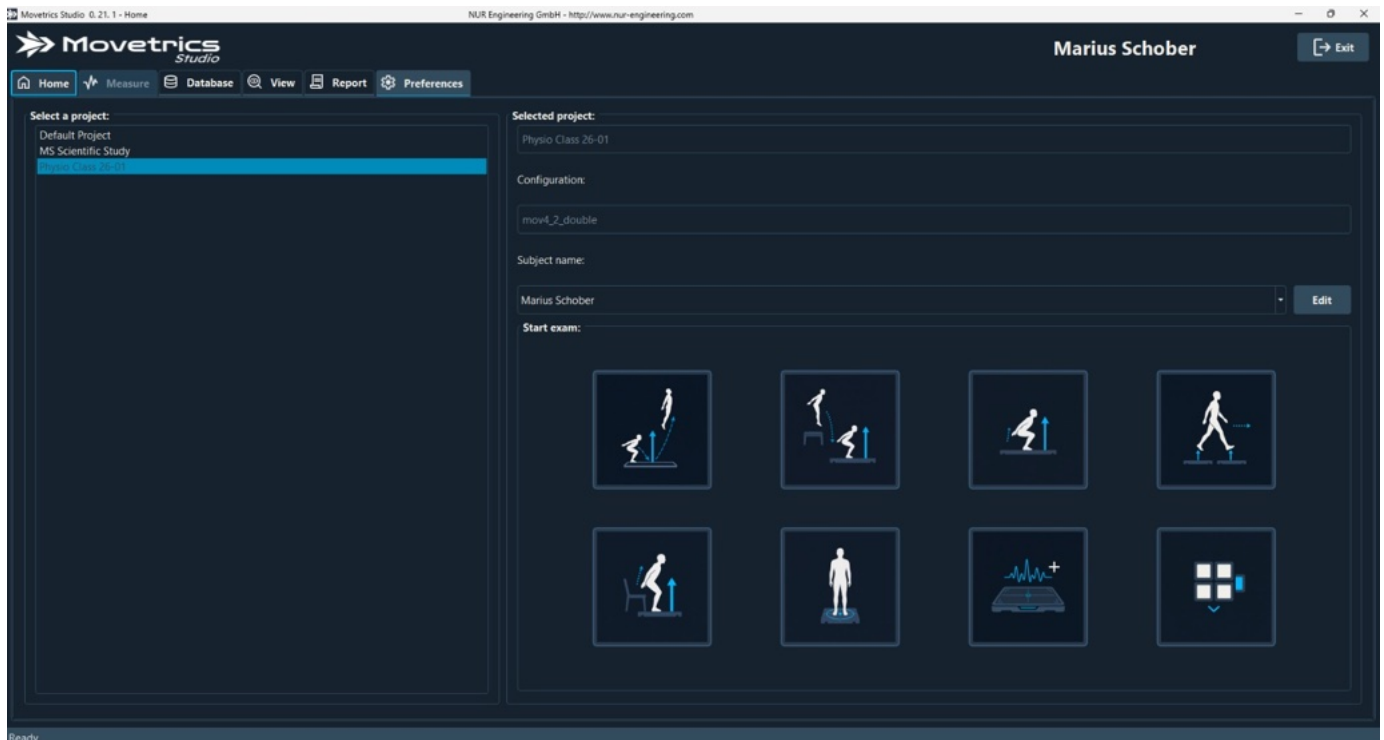
Retain the complete raw CSV data.



Movetrics Studio

MOVETRICS STUDIO TURNS SIX-AXIS DATA INTO A WORKING RESULT.

The F1-3D force plate system includes **Movetrics Studio**, the software carries each test from board configuration and live acquisition to review, reporting and complete raw-data export in seconds.



Movetrics Studio delivers all essential biomechanical calculations and visualizations—no additional software tools or complex setup required. Within one click, a PDF report can be created or raw data exported as a CSV file.

CURRENT PILOT WORKFLOWS

- Countermovement Jump
- Squat Jump
- Drop Jump
- Sit to Stand
- Gait, Balance
- and a free recording mode.

More exam types for a variety of sports and rehabilitation purposes will be added continuously.

PLANNED AFTER THE PILOT: Browser, cloud and mobile workflows.

Pilot measurements use the wired FDT and Movetrics Studio for Windows.



Movetrics Studio

FROM ACCEPTED TEST TO SHAREABLE REPORT.

CALCULATED METRICS

Two distinct modes are available in the software:

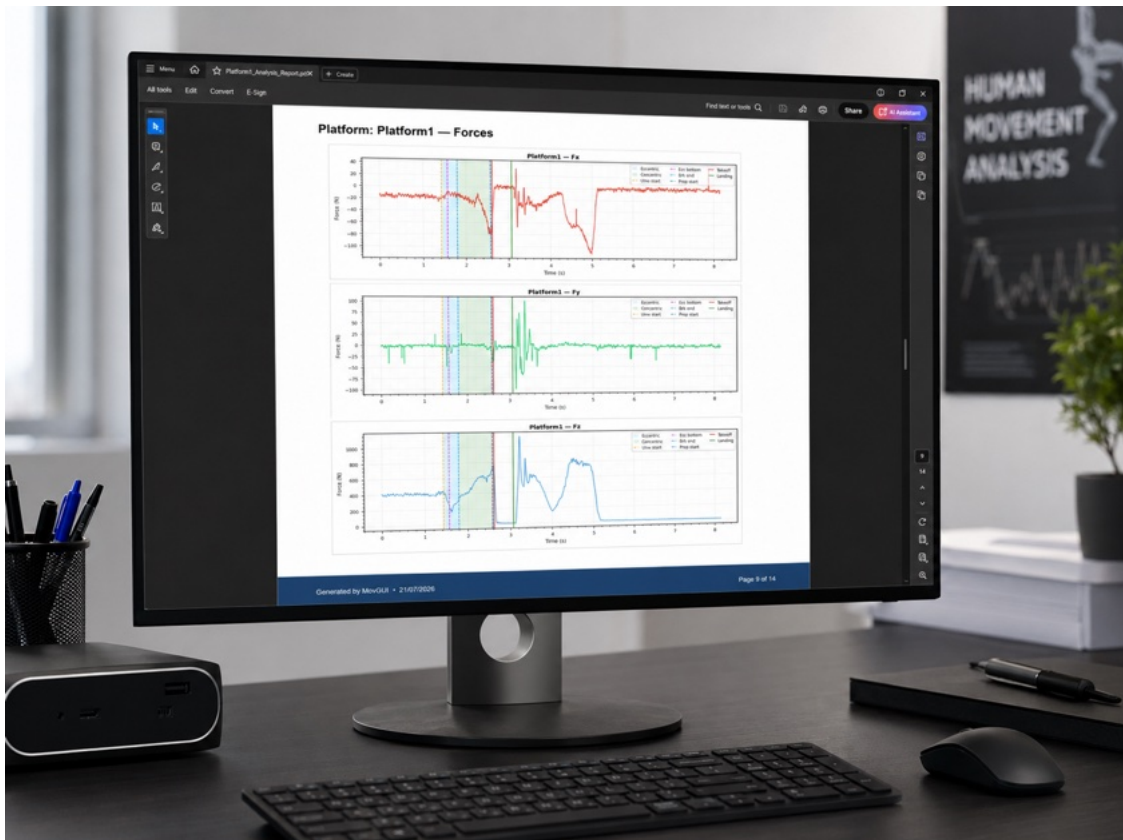
An immediate View mode for just-recorded exercises. This view allows for real-time analysis where users can zoom in and out, and select the relevant force vectors to examine.

The raw data of the recording can be saved as a CSV file, or the user can generate a report, which calculates key metrics and visualizes the detected exercises in detailed graphs.

FROM ACCEPTED TEST TO SHAREABLE REPORT

After the exercise has been reviewed and deemed as acceptable, the user can generate a detailed PDF report. The report provides comprehensive calculations, key metrics, and visualizations for the performed exercise.

During the pilot phase, Movetrics AI is included in any report generation. The AI Report includes all metrics from the standard report and provides AI-driven insights to help users understand what the metrics mean in the context of their specific exercise test (more on page 12).





When generating a report, the calculated metrics depend on exam type and may include but are not limited to the following:

Metric	Why it matters
Center of Pressure (CoP)	Shows where weight shifts under each foot—highlights balance issues or asymmetries.
Resultant force magnitude	Tells you “how hard” the ground is hit—key for monitoring overall load on joints.
Resultant shear force	Reveals sideways slip that stresses knees, ankles, or prosthetic sockets.
Resultant moment	Captures twisting torque—useful for spotting risky pivot or landing mechanics.
Force direction angle (3-D)	Indicates whether force is driven straight down or leaks sideways—guides technique fixes.
Force direction angle (shear-only)	Isolates horizontal push/pull to fine-tune stride or cut movements.
Loading rate (first-peak slope)	Flags rapid impact spikes linked to stress-fracture and overuse injuries.
Impulse	Measures total “push” over time—great for judging explosive power and propulsion.
Maximum force	Simple top number to track overall peak load and progress.
First peak force	Identifies initial shock on landing—crucial for return-to-play decisions.
Time to first peak	Shows how quickly impact hits; slower times often mean softer, safer landings.
Minimum force	Marks mid-stance unloading—helps verify smooth weight transfer.
Time to minimum force	Highlights timing of support phase; useful for gait retraining.
Time between first and second peak	Maps full stance cycle—helps coaches and physios spot stride or jump-landing rhythm issues.



- **CORE CALCULATIONS STAY INCLUDED. ALWAYS.**
- **NO SUBSCRIPTION TO ACCESS YOUR OWN MEASUREMENTS.**
- **YOUR BASE SYSTEM KEEPS WORKING—WITHOUT RENT.**

Core calculations included with Movetrics Studio remain available under the perpetual system licence. Optional AI services may require a separate subscription after the beta period.

CONNECT F1-3D TO THE REST OF YOUR LAB.

F1-3D integrates into professional motion capture software via the Movetrics FDT with 10V analog output and Syn In/Out ports. It enables synchronized EMG or high-speed video capture.

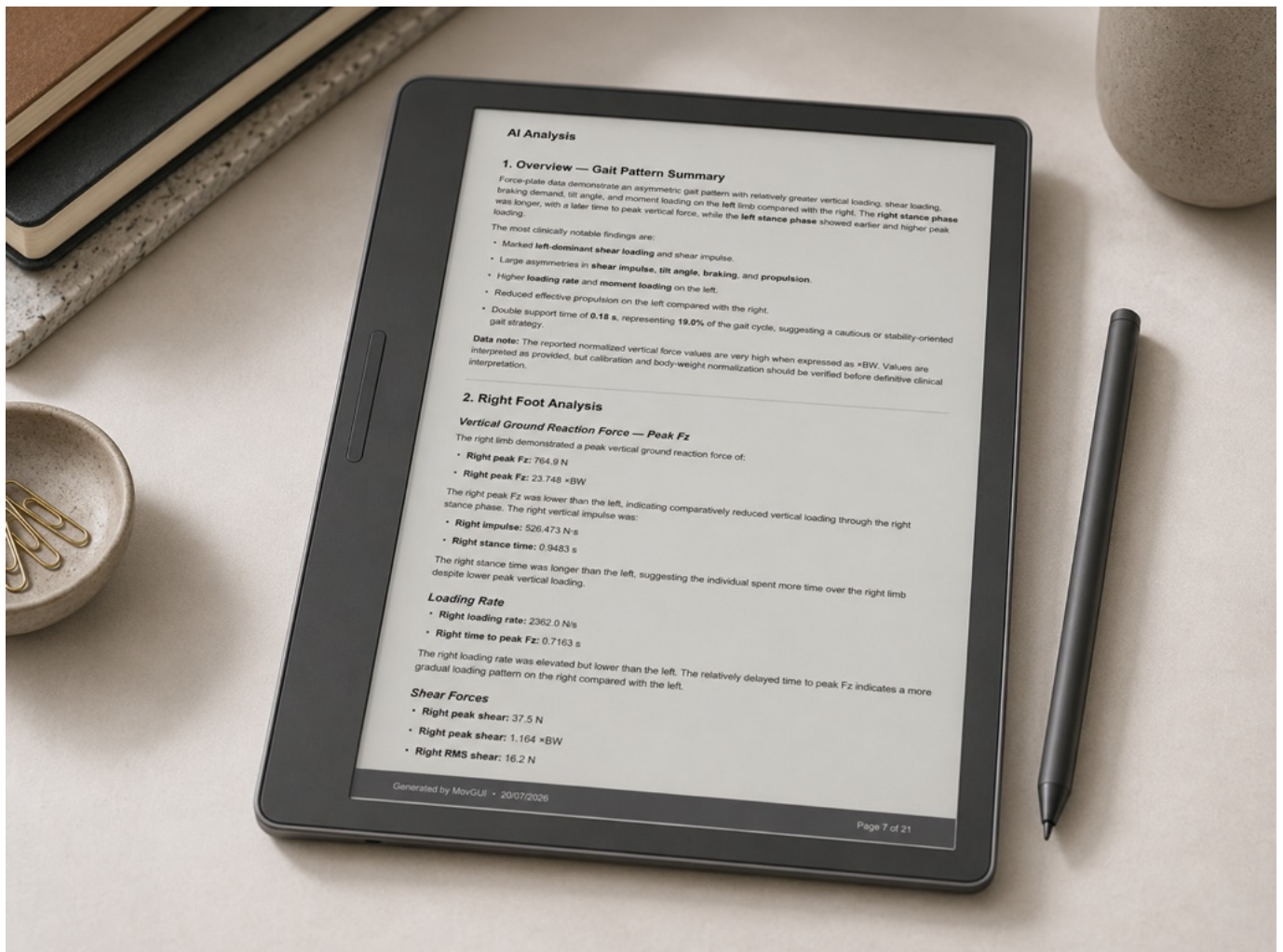
In the pilot phase, we will assist with the analog integration and calibration into your existing software, if required.



Movetrics AI

METRICS FIRST. AI EXPLANATION SECOND.

Our mission is to make complex biomechanical data accessible to every human being. Movetrics AI helps users – who don't have biomechanics expertise – understand complex 3D force-plate results faster.



TURN CALCULATED METRICS INTO A REVIEWABLE EXPLANATION.

Before any AI interpretation begins, Movetrics Studio first independently detects movement phases, calculates the biomechanical metrics, and checks whether the test is valid enough to analyze.

The Movetrics AI analysis only translates verified results, mathematically calculated metrics, and test context into clear, practical guidance and education support:

- Know whether the recording can be used: Valid, Review, or Repeat
- Understand what matters: Key metrics, unusual findings, and relevant limitations



- Act with confidence: See what to improve, repeat, monitor, or investigate further
- Save interpretation time: Turn complex force data into an accessible report within seconds

The mathematics, metric calculations, and phase detection remain fully separate from the AI. The AI explains and educates on the results, it does not have access to raw data.

Movetrics AI does not perform the underlying biomechanical calculations. It receives calculated metrics and test context, then drafts an explanation for professional review.

12 MONTHS INCLUDED FOR FOUNDING PARTNERS.

Movetrics AI is an early beta available in Movetrics Studio Version 0.22, with continuous improvements as our evidence, testing, and user feedback grows.

Movetrics AI is included free of charge for pilot customers. After the beta phase, Movetrics AI will be offered as a subscription, while all core mathematical calculations remain always included.

EVERY AI OUTPUT REMAINS SUBJECT TO PROFESSIONAL REVIEW.

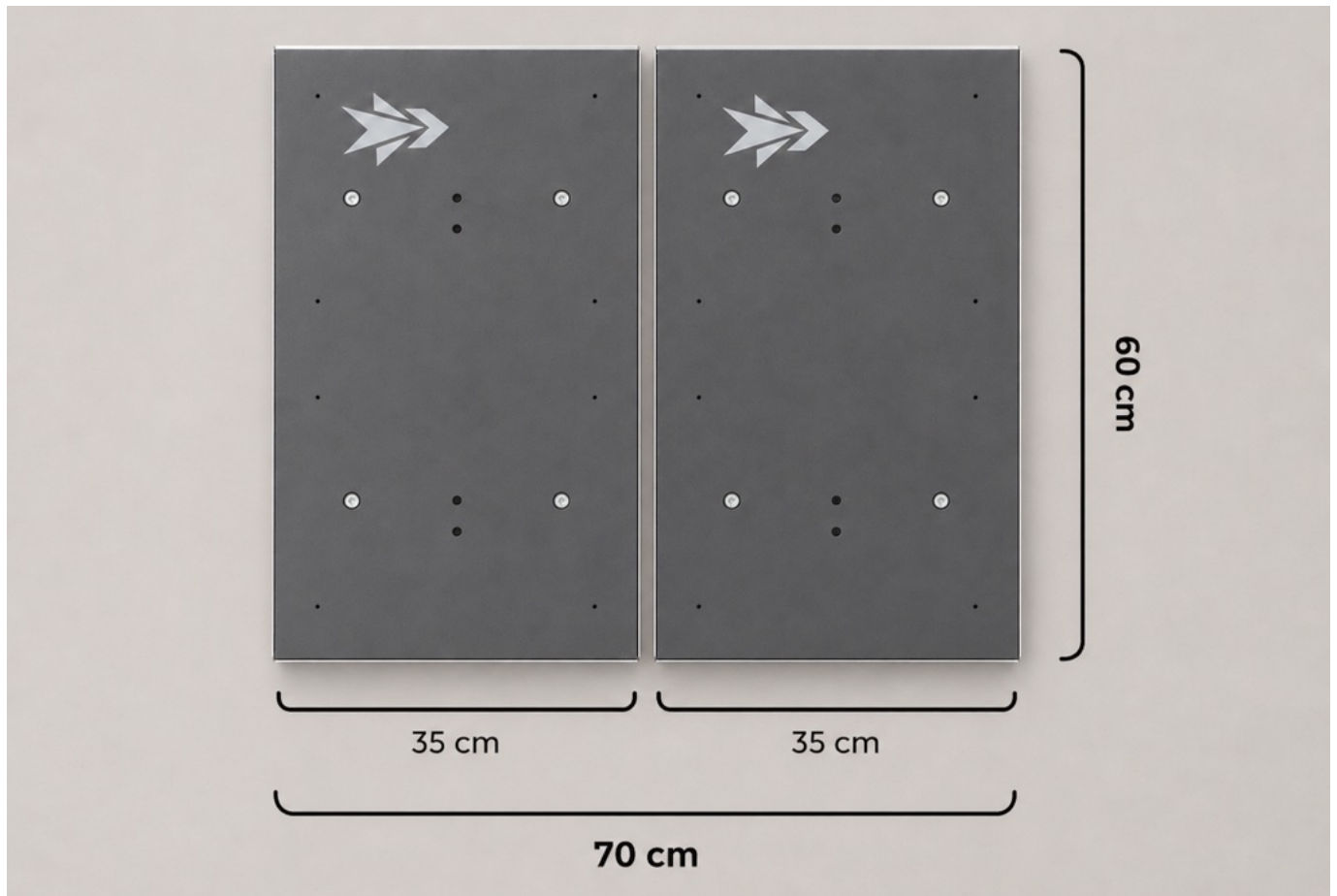
All outputs of Movetrics AI are for educational purposes only and are subject to professional review.



F1-3D · MODULAR & INTEROPERABLE

BUILD THE MEASUREMENT AREA AROUND THE MOVEMENT.

Start with one board. Place two side by side for bilateral work. Extend into a supported multi-board layout when the protocol demands a larger or sequenced measurement area.



SINGLE

One independent 600 × 350 mm measurement surface.

DUAL

Two boards form a 600 × 700 mm side-by-side area - or can be arranged in any other required layout.

MULTI-BOARD

Scale to any supported layout with up to ten synchronized boards — 4 boards form a measurement area of 1200 x 700 mm or 600 x 1400 mm.

CONNECT FORCE, EMG, VIDEO AND MOTION CAPTURE.

±10 V analog output for Fx, Fy, Fz, Mx, My and Mz · Sync In/Out · Analog Out · up to 25 meters between board chain and FDT.



F1-3D · MODULAR & INTEROPERABLE

MODULAR AND SCALABLE. BY DESIGN.

The Movetrix F1-3D system is fully modular – designed to grow and adapt with your testing environment. Each plate (600 × 350 × 30 mm) can be used independently or seamlessly connected with others to form larger synchronized surfaces tailored to your specific use case.



Examples of scalable configurations:

- **2 plates:** 600 × 700 mm area (bilateral stance, squats, jumps, CMJ)
- **3 plates:** 1050 × 600 mm area (multi-phase movement or gait)
- **4 plates:** 1200 × 700 mm or 600 × 1400 mm area (gait runways, sprint starts, prosthetic testing, etc.)
- **6 plates:** 1200 × 1050 mm area (sprint starts, gait runways, use with assistive technology such as wheelchairs)

Plates can be arranged side-by-side, front-to-back, or in offset patterns. Up to ten units can be used in perfect sync, with all data streamed and timestamp-aligned for unified analysis.



F1-3D · SPECIFICATIONS

MECHANICAL & MEASUREMENT SPECIFICATIONS

Current July 2026 specification baseline.

SPECIFICATION	SINGLE BOARD	DUAL SYSTEM*
Quantity	1 board	2 boards per system
Board / combined dimensions	600 × 350 × 30 mm (23.6 × 13.8 × 1.18 in)	600 mm × 700 mm × 30 mm (23.6 × 27.6 × 1.18 in)
Weight	20 kg (44.1 lb)	20 kg (44.1 lb) each 40 kg (88.2 lb) as a pair
Nominal load Fz	10,000 N	20,000 N
Maximum safe load Fz	12,000 N	24,000 N
Nominal moment Mz	2,000 N·m	4,000 N·m
Maximum moment Mz	3,000 N·m	6,000 N·m
Nominal load Fx, Fy	±2,000 N	±2,000 N per board
Maximum safe load Fx, Fy	3,000 N	3,000 N per board
Maximum moment Mx	±900 N·m	±900 N·m per board
Maximum moment My	±600 N·m	±600 N·m per board
Maximum overload moment Mx/My	6,000 N·m	6,000 N·m per board
Static resolution Fz	≤1 N	≤1 N
Resolution Fz	<0.05 N/LSB per sensor	<0.05 N/LSB per sensor
Linearity	±0.5% FSO	±0.5% FSO
3D force accuracy	±0.5% FS	±0.5% FS
CoP accuracy error	under certification	under certification



F1-3D · SPECIFICATIONS

ACQUISITION, SYNCHRONIZATION AND CONNECTIVITY.

The **Movetrix FDT (Force Data Terminal)** provides the communication interface between the F1-3D force plates and the Movetrix Studio software running on a Windows PC.



The force plates are connected to the FDT through a single LAN network cable, allowing the boards to be installed at a distance of up to 25 metres from the computer.

The FDT supplies the required communication, power, and synchronization between the force plates and transfers the acquired force and moment data in real time to the PC. The FDT is connected to the computer through USB-C.

SPECIFICATION	CURRENT BASELINE
Analog interface	± 10 V outputs for Fx, Fy, Fz, Mx, My and Mz
A/D conversion	16-bit
Acquisition rate	Simultaneous, up to 2,000 samples/s per channel
Battery	More than 3 hours; rechargeable by USB-C
Storage	SD card; capacity depends on configuration
Synchronization	Sync In / Sync Out



SPECIFICATION	CURRENT BASELINE
Maximum board-to-FDT cable length	Up to 25 meters

CONNECTION	CURRENT BASELINE
F1-3D to F1-3D	Ethernet Network Cable (shielded)
F1-3D to FDT	Ethernet Network Cable (shielded)
FDT to PC	USB-C
F1-3D to PC (local)	Wi-Fi*
F1-3D to Movetrics Cloud	Wi-Fi*
F1-3D to Mobile Devices	Bluetooth* or Wi-Fi*
Sync In / Sync Out	3.5 mm Mono Jack Cables
Analog Out	DB-25 female connector

**During the pilot phase, measurements require the included Force Data Terminal (FDT) via wired connections. The shipped F1-3D hardware is already equipped with Wi-Fi and Bluetooth technology, which will enable wireless cloud-based tests with mobile devices and web browsers. Cloud functionality will become available in future updates.*

YOUR DATA. LOCAL, COMPLETE AND EXPORTABLE.

All raw data are fully accessible locally as a CSV file – ideal for those who want to develop custom algorithms or run Python/R-based analyses beyond the provided Movetrics Studio interface.

PLACE IT. GRIP IT. OR MOUNT IT.

The F1-3D system is equipped with advanced, industry-leading non-slip rubberized grippers that ensure stability on a wide range of floor surfaces — from clinic floors to training turf, without the need for additional mounting.

For more permanent or high-impact applications, each plate includes pre-drilled mounting points, allowing it to be securely screwed into the ground or attached to a rail system.

HIGHER-LOAD CONFIGURATIONS AVAILABLE.

On custom request, the F1-3D system can be manufactured and offered with Fz: 20,000 N per board / 40,000 N dual system. Max Mx and My will increase accordingly.



CURRENT PILOT CONFIGURATION — JULY 2026

Please note that this information is subject to ongoing updates and modifications. To guarantee access to the latest version, visit movetrics.com/f1 or contact us via email at contact@movetrics.com.



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F1-3D · EXCLUSIVE PILOT PROGRAM

BEFORE PUBLIC RELEASE, 20 TEAMS WILL HELP SHAPE WHAT F1-3D BECOMES.

The first twenty Movetrix F1-3D systems are not for sale to the public.

These are not just discounted demonstration units; they are the inaugural 20 customer systems, each individually numbered 01/20–20/20 and directly commissioned by our team to help refine the system. This hands-on collaboration is vital because the human body does not move in a single dimension; it accelerates, brakes, stabilizes, rotates, and constantly redirects force.

Vertical force plates answer some questions. But they cannot measure the important horizontal forces and moments that complete the picture.

Movetrix F1-3D measures all six components — F_x , F_y , F_z , M_x , M_y , M_z — independently for each side plus the COP.



Two ultra-thin plates. Twelve synchronized measurement channels. Live analysis, AI reports, and complete raw data in Movetrix Studio.

No six-figure laboratory.

No mandatory software subscription.

No locked-away data.

Connect three cables. Open Movetrix Studio. Start measuring.



F1-3D · EXCLUSIVE PILOT PROGRAM

THE COMPLETE FOUNDING SYSTEM. ONE FIXED PRICE.

What only the first 20 receive:

DUAL F1-3D PILOT SYSTEM

€14,990

excl. VAT

Everything required to measure is included:

The complete measurement system:

- 2x independent six-axis F1-3D force plates (600 x 350 x 30mm each)
- 2,000 Hz measurement
- 1x Force Data Terminal
- Complete site-matched Ethernet and USB-C cable kit
- Synchronization and external data connectivity

The complete measurement system:

- Perpetual Movetrix Studio licence for the purchased system, including 24 months of software updates.
- Live recording and analysis
- CMJ, Squat Jump, Drop Jump, Sit-to-Stand, Gait, Balance, and free recording
- PDF reports and complete raw CSV export

We get you measuring – we don't stop at installing:

- Personal commissioning with the Movetrix team
- Your primary workflow configured with you
- Two hours of remote training
- One installation and enablement visit within the included EU service area
- 24 months of personal priority support
- One jointly defined 90-day success plan

Founding Partners privileges:

- Permanently numbered Founding 01/20-20/20 hardware
- Twelve months of Movetrix AI beta
- The printed Founding Edition of *The Complete Guide to 3D Force Data*
- Five-year limited B2B hardware warranty
- Direct influence over the protocols and workflows we integrate next
- The right to purchase up to 10 additional identical dual systems for €14,990 each within 18 months

No subscription required to keep using your system.



F1-3D · EXCLUSIVE PILOT PROGRAM

OUR LIVE-DATA GUARANTEE.

Accept F1-3D only when you see live data. At delivery and installation, your system must:

- stream synchronized Fx, Fy, Fz, Mx, My and Mz from both plates;
- record your agreed workflow; and
- produce the corresponding CSV report or Movetrics Studio report.

If it does not, we fix it.

If we cannot make it work within 30 days, return the complete system and receive **100% of your purchase price back.**

Not another promise. Your money back.

You are buying a working result — and confirming it on live data, at delivery.

WE ARE NOT LOOKING FOR 20 CUSTOMERS

We are looking for 20 Founding Partners who will put F1-3D to serious use.

The F1-3D is currently reserved for:

- universities of applied sciences;
- teaching and applied-research laboratories;
- biomechanics and sports-science groups;
- high-throughput professional sports-performance environments.

We select for frequency of use and quality of fit—not institutional prestige.

To qualify, you need:

- a meaningful 3D force measurement use case;
- a named person responsible for the system;
- a plan to begin measuring within 14 days;
- the willingness to tell us honestly what works and what must improve.

If vertical jump metrics are all you need, F1-3D may be more system than you need.

If nobody will use it regularly, do not apply.

We would rather decline a sale than watch one of the first 20 systems collect dust.

In return, we ask for one measurable 90-day objective and one structured field-review conversation.

Your data, name, logo, results, or endorsement are appreciated but will never be published without your explicit approval.



F1-3D · EXCLUSIVE PILOT PROGRAM

FOUNDING PREPAYMENT IS THE STANDARD.

PREPAYMENT — PRIORITY

€14,990 prepayment

A prepayment gives you priority production position, it confirms your numbered Founding system, and 18-month expansion right.

Expected delivery time: four to six weeks after payment.

MILESTONE BASED

€14,990 in two installments:

€7,495 to begin production

€7,495 before shipment

Before the second payment, we demonstrate your completed system live via a video call or on-site in Duisburg, Germany: both plates streaming synchronized 3D-force data, your agreed workflow recording and the required export being produced.

Expected delivery time: six to eight weeks after initial payment.

Applications for our *Founding 20* pilot program closes on 30 September 2026 — or immediately when all 20 systems have been allocated.

The application is deliberately short.

IN 30 MINUTES, WE DETERMINE WHETHER F1-3D FITS YOUR WORK:

- 01** The users and what you want to measure.
- 02** Where, how, and how frequently F1-3D will be used
- 03** Who will operate it
- 04** What success must look like after 90 days

If the fit is right, we approve your application and send you a formal pilot offer. An offer alone does not reserve a system. Allocation is confirmed by received payment.

APPLY FOR THE FOUNDING 20

contact@movetrics.com

Subject: Founding 20 Application

Prices exclude VAT. Freight and travel beyond our included service (Duisburg ± 250km) are agreed before ordering. Movetrics F1-3D is a professional measurement system and is not offered as a medical device for diagnosis. Programme, warranty, and acceptance terms apply.