

Trusted by over 1,000 of the world's elite sporting teams, universities and defence departments



















Unparalleled insight into performance, injury risk and rehabilitation

Driven by a multidisciplinary team of sports scientists, researchers, clinicians, designers, developers, and engineers, VALD systems enable you to adopt a truly personnel-centric approach when it comes to understanding human movement, performance, injury risk and rehabilitation.

Our systems can be used across various disciplines from strength and conditioning to medical and rehabilitation, offering unparalleled insight into musculoskeletal and neural performance.

Unique solutions for tactical personnel



Military

Improve military personnel performance at every stage of the operational life cycle.



First Responders

Enhance training progress and screening to reduce injury risk for first responders.



Government

Identify talent, monitor performance and develop training programs for field personnel.

VALD systems



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Requirements of tactical personnel are varied and unique

Physical requirements and job characteristics vary across different corps, units and roles.

VALD systems allows for testing and collection of data to build out truly representative subgroups within your population for comparison and analysis.

Understand what is normal and/or acceptable and set tailored benchmarks for deployment or return to function. Have confidence that benchmarks are based in fact and reflect the physical requirements of the job.

Improve personnel readiness and effectiveness

VALD systems allow you to improve the performance of your personnel and maintain their health and wellness.

- Track the health and wellness of your personnel over time.
- Provide instant feedback from performance assessments to inform physical training.
- Improve exercise compliance by engaging personnel in their performance assessments and/or rehabilitation pathway.



FORCEDECKS

DUAL FORCE PLATE SYSTEM

Force plates that finally break free of the lab

Measure, train and monitor strength with ForceDecks; the world's fastest, easiest and most powerful dual plate system for analysing neuromuscular strength and imbalance.

Skip the time-consuming and complex process of analysing raw force plate data, and get auto-analysed results in real time.

Jump, land, squat, push, pull and more!



ForceDecks automatically detect and analyse 14+ common force plate tests

Traditionally, force plate software was only capable of collecting and displaying raw data, along with a few simple summary metrics, meaning any further analysis was done slowly and manually. With ForceDecks, all the heavy lifting is done for you - from detection to analysis and reporting.

Ballistic

Countermovement Jump*

Countermovement Jump - Loaded*

Abalakov jump

Single Leg Jump*

Squat Jump*

Squat Jump - Loaded*

Drop Jump*

Single Leg Drop Jump*

Land and Hold*

Single Leg Land and Hold*

Hop Test*

Hop and Return*

Single Leg Hop Test*

▶ General Force-Time Analysis

▶ Isometric

Isometric Shoulder I-Y-T

Custom Isometric Test*

Single Limb Isometric Test*

Isometric Mid-Thigh Pull (IMTP)

Isometric Squat Hold

Dynamic

Squat Assessment

Single Leg Squat Assessment

Push Up

▶ Balance

Quiet Stand

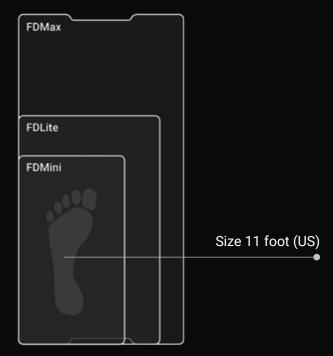
Single Leg Stand

Single Leg Range of Stability

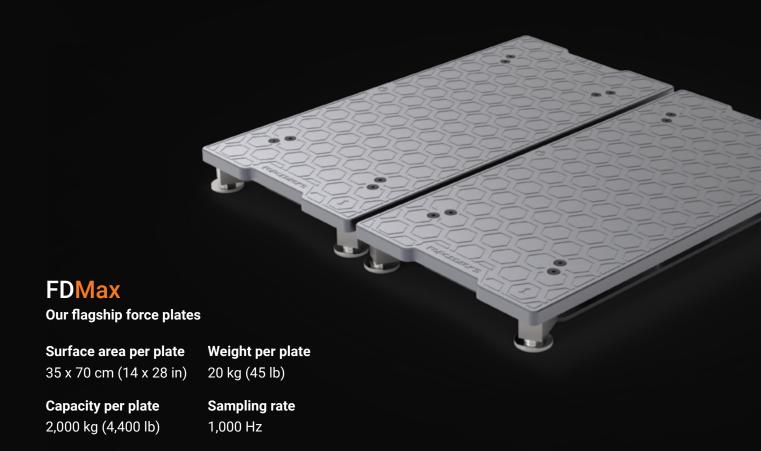
*Automatic detection

HARDWARE

ForceDecks have been designed to endure even the heaviest and strongest of personnel, while maintaining pinpoint accuracy, reliability and affordability. ForceDecks hardware is available in three models: FDMax, FDLite and FDMini.



ForceDecks size comparison



FDLite

The best of both worlds

Surface area per plate

30 x 48.5 cm (12 x 19 in)

Capacity per plate

2,000 kg (4,400 lb)

Weight per plate

9 kg (20 lb)

Sampling rate

1,000 Hz

Surround

High-density foam

Optional accessory

Hard travel case



FDMini

Affordable, portable and compact

Surface area per plate Sampling rate

22.5 x 40 cm (9 x 16 in) 1,000 Hz

Capacity per plate Surround

1,000 kg (2,200 lb) High-density foam

Weight per plate Optional accessory

5 kg (11 lb) Hard travel case



SOFTWARE



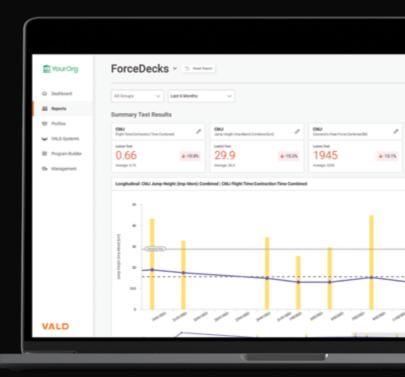
Collect data with ease

The ForceDecks app allows you to rapidly collect test results wirelessly for a whole unit with ease.

Simply select personnel to test instantly

Monitor personnel over time

Track trends in personnel health and performance with longitudinal reporting. Visualise multiple tests for individual personnel or a whole unit, leveraging insights from the historical data to make more informed decisions for the future.



Track longitudinal data in VALD Hub







ForceDecks Jump displays instant results compared to past tests

Monitor personnel with relative feedback

ForceDecks Jump software is designed to automatically detect movements and display results relative to past tests so you can immediately see how personnel have performed compared to their historical results.

Third-party uniaxial and triaxial plate support

ForceDecks software is also compatible with a range of third-party uniaxial and triaxial force plates including hardware from PASCO, Kistler, AMTI, FitTech and Bertec.

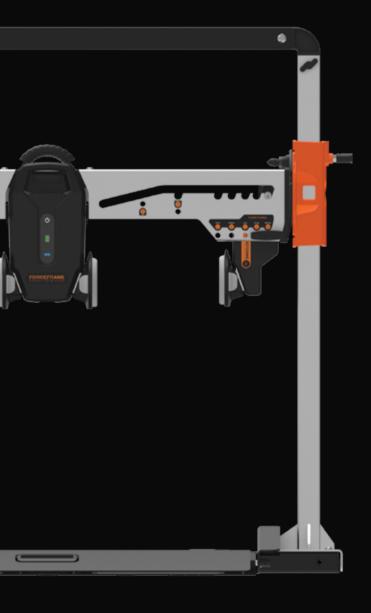












FORCEFRAME

STRENGTH TESTING SYSTEM

The strongest choice for strength testing and training

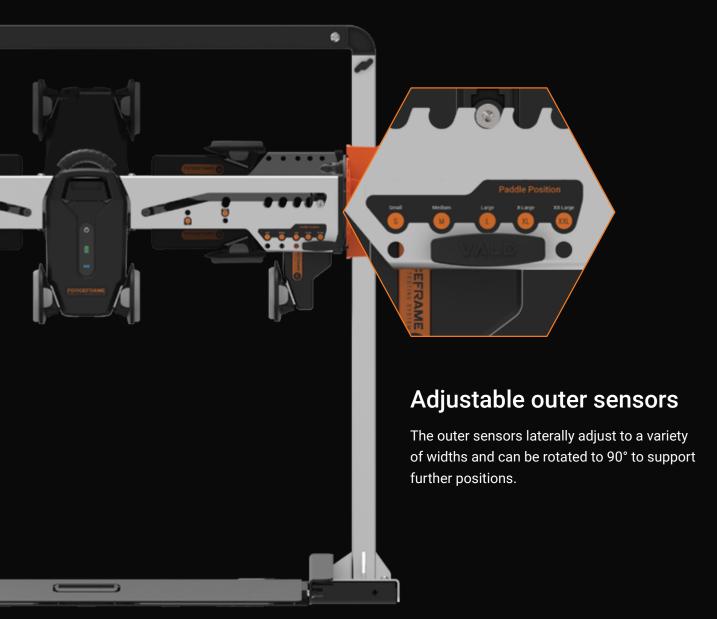
Combining advanced sensors with real-time results and analytics, the ForceFrame (patent pending) is the most versatile and portable system for testing muscle strength and imbalance, as well as for prescribing and performing isometric training.

Corps and units use and trust the ForceFrame for evaluating and monitoring personnel, as well as for managing load, modulating pain and objectively quantifying rehabilitation progress.

Test isometric strength in 35+ positions. Train isometric strength in 130+ exercises.

With its modular frame system and fully rotational crossbar, the ForceFrame can be quickly and easily adjusted to test isometric strength in upper and lower body positions, including hip, knee, shoulder, ankle and neck muscle groups, as well as custom tests if you feel like getting creative. **▶** Hip **▶** Ankle Adduction Inversion Abduction Eversion Flexion **▶** Shoulder Extension Internal rotation Adduction **External rotation** Abduction Flexion **▶** Knee Extension Flexion Internal rotation Extension External rotation **▶** Neck ... and more Lateral flexion Flexion Extension

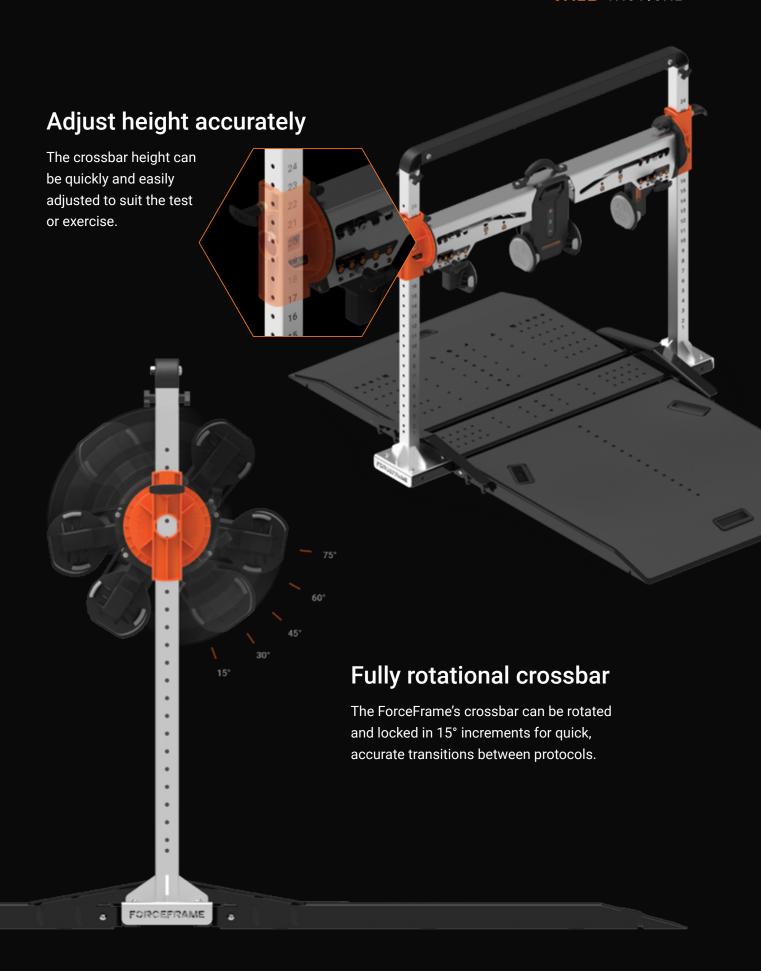
HARDWARE



Detachable head unit

When you're constantly on the move, your equipment needs to be able to travel with you. Featuring a portable head unit which unclips and fits in a backpack, the ForceFrame allows quick, easy and comparable testing, regardless of whether you're on base or in the field.





SOFTWARE



Live graphing of the force trace shows strength in newtons

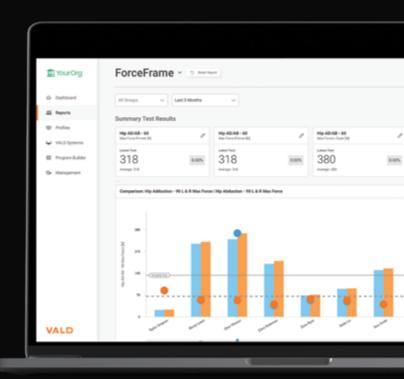
Real-time biofeedback

The ForceFrame app makes data collection easy. Connect the ForceFrame to your PC via USB or iOS device via Bluetooth to see results in real time so you can provide immediate feedback to personnel, as well as longitudinal comparisons.

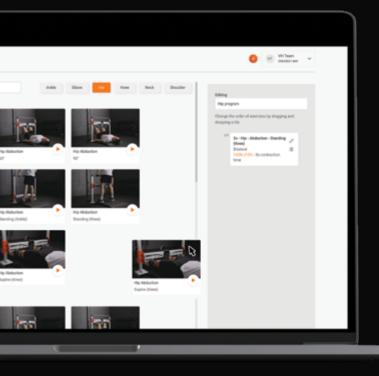
Review max and average strength and compare strength ratios and imbalances in real time.

Monitor personnel over time

Once a test or training session is complete, results are uploaded to VALD Hub. Review individual tests, compare results over time or assess across units.



Track longitudinal data in VALD Hub



Program builder in VALD Hub

Prescribe isometric training programs

Harness your testing baselines to build and prescribe isometric training programs from VALD Hub.

Use a comprehensive training library of over 130 isometric exercises to build personalised programs. Once the program is complete, it is pushed to the ForceFrame app immediately and accessible for personnel to use in self-guided training.

Train personnel independently

The ForceFrame app is easy and simple for personnel to use without the need of practitioner supervision. Personnel receive a step-by-step video guide on how to complete training exercises and are shown clear strength targets that are based on a percentage goal of their previous voluntary max contraction.



Personnel's view in training mode







NORDBORD

HAMSTRING TESTING SYSTEM

The king of hamstring testing

Combining advanced sensors, real-time data visualization and cloud analytics, the NordBord is a comprehensive system for accurately quantifying and monitoring personnel hamstring strength and imbalance.



Test and train isometric and eccentric hamstring strength

With its simple, easy-to-use design, the NordBord can be used to quickly measure hamstring strength and imbalance in a range of positions and exercises.

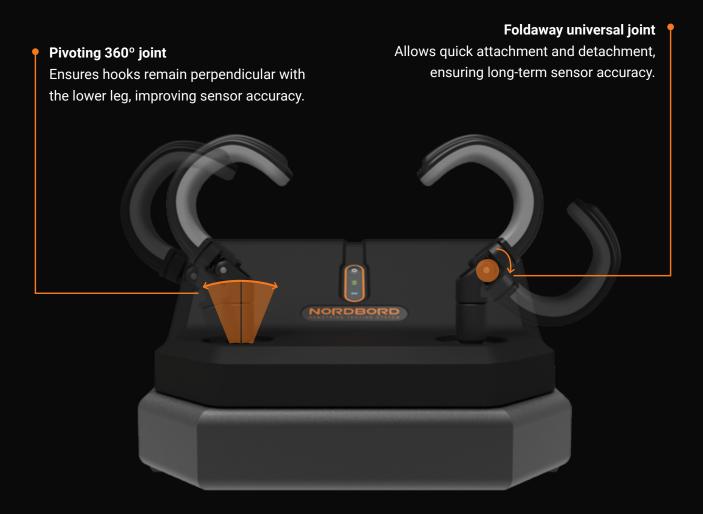
► Eccentric Nordic

Razor

▶ Isometric

Prone 60° hip flexion 90° hip flexion

HARDWARE





Built for comfort

The NordBord knee pad is constructed with soft and durable foam.



Integrated wheels

Built-in wheels and handle make moving the NordBord easy, meaning you're no longer confined to only testing in the gym.



Quick, repeatable setup

Record your knee position in the NordBord app to speed up setup for future tests, and to enable torque calculations.

SOFTWARE



Real-time biofeedback

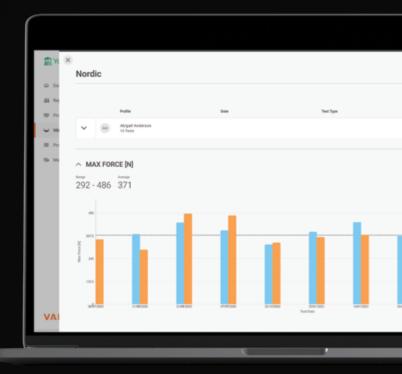
Real-time biofeedback

The NordBord app makes data collection easy. See results in real time so you can provide immediate feedback to personnel, as well as comparisons with past sessions.

The live graph shows hamstring force output for both limbs and the maximum values for each. Average strength across all repetitions is also highlighted for quick review.

Monitor personnel over time

Track trends in personnel health and performance with longitudinal reporting. Visualise multiple tests for individual personnel or a whole unit, leveraging insights from the historical data to make more informed decisions for the future.



Results in VALD Hub







HUMANTRAK

MOVEMENT ANALYSIS SYSTEM

3D motion capture and biomechanical analysis

Use objective data to quantify movement deficiencies and compensations with the HumanTrak Movement Analysis System. Taking the guesswork out of common movement assessments, HumanTrak allows you to see what the eye cannot, so you can focus on prioritizing which personnel need attention and help mitigate their injury risk.

Assess movement quality, range of motion and stability in 20+ common tests and exercises

▶ Lower-body dynamic

Single Leg Squat

Squat

Drop Jump

Lunge

Overhead Squat

Countermovement Jump

▶ Cervical spine

Lateral Flexion ROM Flexion/Extension ROM

▶ Shoulder

Abduction/Adduction ROM
Flexion/Extension ROM
Internal/External Rotation ROM

▶ Stability

Single Leg Posture

Tandem Stand

Single Leg Stand

Standing Posture

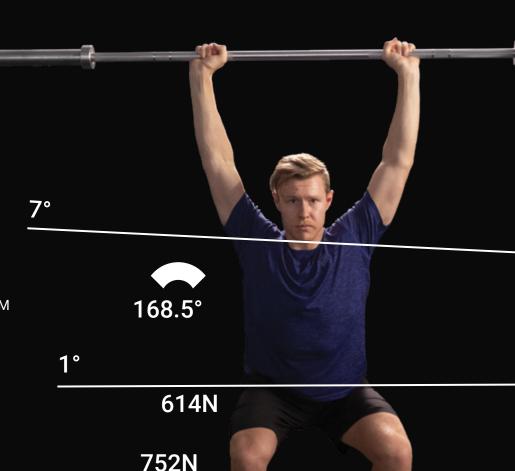
Semi-Tandem Stand

30 Second Sit-to-Stand

▶ Auto-trainer

Build and run interactive training programs

...and more



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HARDWARE



The Kit



3D infrared camera



Camera tripod



Custom laptop



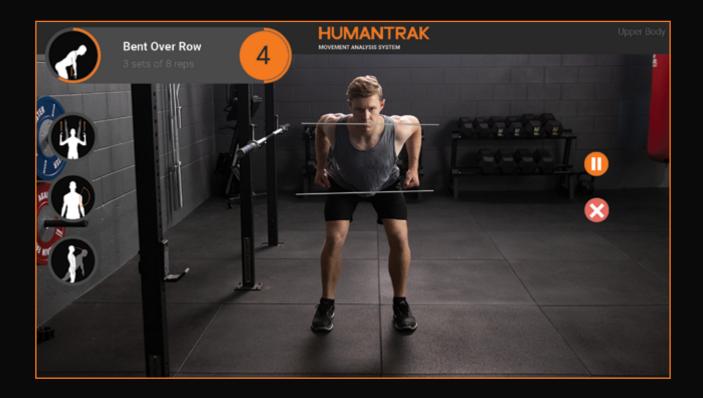
Wireless keyboard

Movement analysis, now made practical

Unlike other movement analysis systems that fill an entire room or require complex setup and lengthy data processing, HumanTrak fits in a suitcase and can be unpacked, set up and ready to test in less than five minutes.

Once set up, this world-leading technology allows you to select from a range of pre-programmed tests so personnel can immediately begin their assessment and view their performance in real time.

SOFTWARE





AutoTrainer

Build a tailored training program with AutoTrainer, complete with reps, sets and rest. AutoTrainer guides personnel through each exercise in the program for independent training.



SwayTrak

SwayTrak reports centre of mass, movement in the anteroposterior and mediolateral directions during balance assessments. Overall sway is quantified with a balance algorithm, which can be used for baseline testing and tracking changes over time.



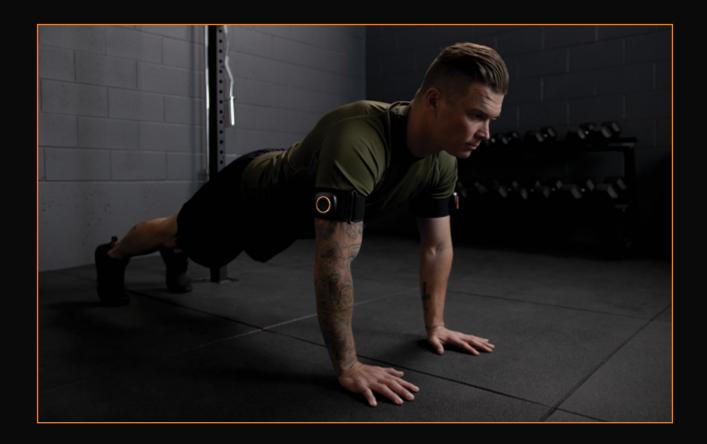
Real-time overlay

Both practitioner and personnel can see the joint range of motion metrics overlaid in real time.



Instant reporting

Once an assessment is complete, a comprehensive report automatically generates photo snapshots of key points and test results.



AIRBANDS

WIRELESS BFR CUFFS

Next generation BFR training

AirBands leverages the benefits of blood flow restriction (BFR) to reduce the time and intensity required to build muscle and increase strength.

Fully wireless, automated BFR Cuffs, AirBands can help practitioners to accelerate training results and manage loads.

Stronger outcomes

Research has shown when combined with appropriate training programs, blood flow restriction can:

- Reduce atrophy and muscle loss after long periods of immobilization
- Improve muscle strength with as little as 30% load
- Enhance aerobic capacity
- Increase muscle hypertrophy with as little as 30% load
- Increase the production of muscle protein synthesis

HARDWARE

The AirBands cuff

AirBands cuff features a velcro loop system for superior comfort and durability. Built from sweat-resistant fabric cloth lined over a custom-built, medical-grade air bladder.

Arm cuff: 25cm - 45cm/ 10" - 18". Leg cuff: 45cm - 65cm / 18"-26".



AirBands feature a rechargeable battery, sensor, valve, pneumatic pump air bladder and a Bluetooth module that connects to your smart device.



SOFTWARE



Take the guesswork out of occlusion

The AirBands app

- · Wireless pairing.
- Automatic inflation/deflation.
- Individualised pressure calibration.





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SMARTSPEED

TIMING GATE SYSTEM

The smartest and easiest-to-use timing gates on the market.

Quick to set up and straightforward to run, every element of the SmartSpeed system has been designed with the user in mind. SmartSpeed allows you to spend less time setting up and more time coaching.

Highly accurate, delivering precise, reliable results, SmartSpeed is trusted by the world's most elite athletes, teams and leagues, where every thousandth of a second counts.



SmartSpeed Trade-In Program

Do you have a timing gate system you'd like to upgrade? Contact us to learn more.

SMARTSPEEDPLUS

TIMING GATE SYSTEM

The world's most advanced and easy-to-use timing gate system.

The biggest innovation in timing gate technology since timing gates were invented. SmartSpeed Plus is powerful, flexible, and above all else: easy-to-use.

- The only timing gate available with an inbuilt, 360° wrap-around LED display. See your athletes' names, split times, results and even battery status at a glance, on any gate.
- Hub-free connectivity for your gates. Find, connect, identify and reorder your gates seamlessly via the SmartSpeed app.
- Whether you want to run staight-line sprints, agility and reactive agility drills or a variety of other tests, SmartSpeed Plus is the timing gate of choice.





Rechargeable Battery Packs

To ensure you never run out of charge during long or back-to-back testing sessions, SmartSpeed Plus comes with replaceable and rechargeable battery packs and a four-battery fast-charging dock.

You no longer need to pack your gates up to charge them.

Backwards Compatibility

SmartSpeed Plus is backwards compatible with SmartSpeed Pro. SmartSpeed Plus can replace your SmartHub and works as a standalone gate*.

^{*}Coming soon

SMARTSPEED DASH

TIMING GATE SYSTEM

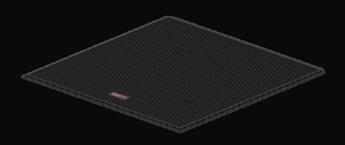
Entry-level timing gate system for straight-line sprint timing and agility drills.

If you simply want to measure speed, SmartSpeed Dash is the system for you.

Connect and manage up to 10 gates from the SmartSpeed app, then pack them away into their compact travel case for transport.



ACCESSORIES





SmartScan

RFID wrist bands and scanner for automating athlete identification.



SmartPad

Pressure-sensitive start pads for increasing start precision.

SMARTJUMP

PORTABLE JUMP MAT

Measure vertical jumps and provide real-time biofeedback.

Requiring no calibration, SmartJump is a simple-to-use, entry-level jumps testing system, controlled seamlessly via the SmartSpeed app.



SmartShoxx

Impact sensor for instrumenting kicking targets, starting blocks and more.

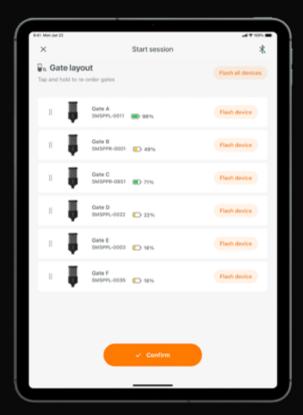


Speed, agility, reactivity, jumps and skills. Test them all and more with **SmartSpeed**.

	SMARTSPEED PLUS	SMARTSPEED DASH
Key Features		
360° wrap-around LED display	✓	
Removeable and rechargeable batteries	✓	
External API	✓	✓
Data visualization in VALD Hub	✓	✓
Drill Types		
Sprints		
Straight-Line Sprints	✓	✓
Traffic Light Sprint, Force Velocity Profiling	√ *	
Change of Direction		
Pro Agility	✓	✓
Reactive Pro Agility, Traffic Light Sprint Cuts, Y Agility	✓	
Jumps (SmartJump accessory required)		
Abalakov Jump, Countermovement Jump, Drop Jump	/ *	✓
Hop Test, Squat Jump, Vertical Jump	~ *	✓
Free Timing		
5-0-5 Drill, Box Drill, L-Drill, Lane Agility Drill, T-Test	~ *	✓
Lap Timing, Serpentine, Grid	~ *	
Intervals		
Repeat Sprint Ability	~ *	
Intermittent Fitness Tests		
Intermittent Fitness Test, Beep Test, VAM-Eval Test, Yo-Yo Test	~ *	
Compatible Accessories		
Portable Jump Mat	/ *	✓
SmartScan (RFID)	✓	~
SmartPad	~ *	
SmartShoxx	/ *	
		*Coming soor

The New SmartSpeed Plus App

Spend less time setting up your gates and more time coaching.

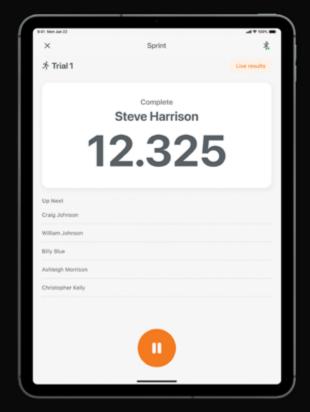


Easily find, connect, identify and reorder your gates

The new SmartSpeed Plus app finds and manages your gates seamlessly, and when paired with SmartSpeed Plus, even allows you to reorder them remotely. No need to physically walk through every gate.

View live results and manage your queue

When running a testing session, you need all your controls at your fingertips. View real-time splits and results, previous tests, see which athlete is up next and even reorder the queue, all in one place.



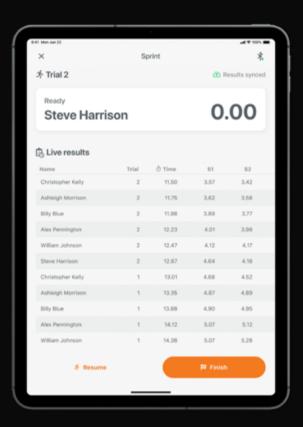
Live, in-app leaderboard

It would not be a competition without a leaderboard. Keep up to date with live-updating results, even when you have run multiple rounds or trials.



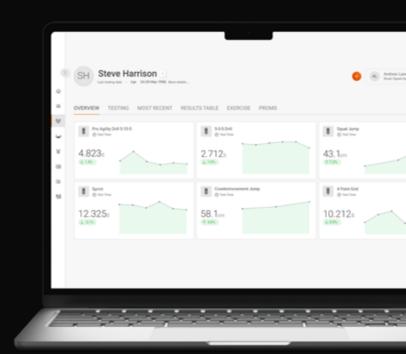
View your data in VALD Hub

Test results are automatically saved to athlete profiles on VALD Hub, where you can easily generate and customise your dashboards, visual reports, and track your athletes' improvement.



View battery status

View charge levels for each gate in your system, and for SmartSpeed Plus, battery status can be displayed on its inbuilt LED display.





DYNAMO

HANDHELD STRENGTH & ROM

Hundreds of tests from the palm of your hand



With an ergonomic design, the DynaMo range of handheld dynamometers and inclinometers allow you to assess your clients' strength and range of motion (ROM). View your clients' results in real time and track their progression over time.

Enabling you to conduct client testing and collect clinical data anywhere, the DynaMo range allows you to engage your clients, improve their understanding of their results and increase their adherence by using real-time data.

The DynaMo Range





DYNAMOPLUS

The world's most advanced handheld dynamometer and inclinometer.

The handheld and modular design of Dynamo Plus measures 300+ strength and ROM test types. With its Smart Attachments and integrated display, it enables accessible musculoskeletal measurement for all exercise professionals.

Measure strength and range of motion

Highly modular system

Auto-detect Smart Attachments

View real time data on-screen and in-app

DYNAMOLITE

Compact and versatile handheld dynamometer and inclinometer.

A compact, handheld and wearable system that fits in your pocket. Enabling 200+ strength and ROM tests and featuring a wearable design to enable hands-free assessments.

Measure strength and range of motion

Pocket-sized and wearable

View real time data in-app



Push, Pull, Grip and ROM testing

The easy-to-use DynaMo app enables you to perform almost any imaginable ROM test for all major joints in the body, with intuitive test selection, automatic data recording to a clients' profile and simple, powerful reporting.

Cut down on writing time-consuming clinical notes, by leveraging DynaMo reporting.

Tests by body area

	-	-		-	п			
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Hip

Lower Body

Shoulder

Neck

Knee

Scapula

Ankle

Elbow

Foot

Wrist

▶ Trunk

Hand

Thoracic

Tests by attachment

▶ Dynamo Plus

Dynamo Lite

Push Tests

Push Tests

Fixed Point Tests

Fixed Point Tests

ROM Tests

ROM Tests

Grip Strength

Pull Tests

SOFTWARE

Quickly select from hundreds of tests

DynaMo for iOS and Android allows you to perform hundreds of test types. Simply select the chosen body region, choose the test you want and start testing.

Quickly access your ten most commonly used DynaMo tests from the app homepage display to get into your testing faster.





View test data in real time

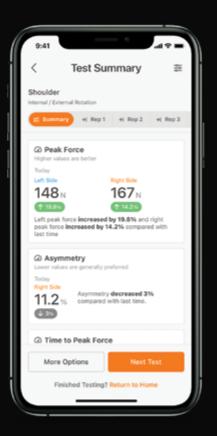
Capture rep by rep results whilst conducting the test and receive immediate summary data once the assessment is finished.

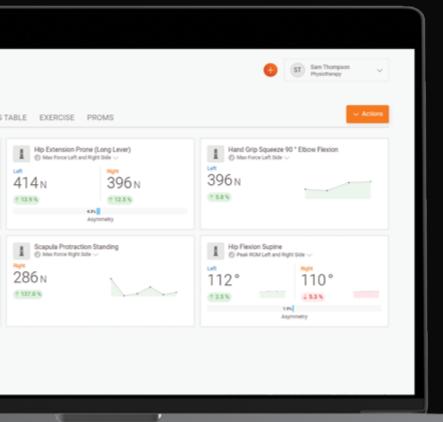
The results are designed to help you make better informed clinical decisions. Further, the results are a powerful communication touchpoint between you and your client.

Immediate summary results in app

See an immediate result summary after the test is completed. Including, metrics such as peak force, ROM, rate of force development, time to peak force and asymmetry.

The test results are also broken down into rep-by-rep for further analysis or discussion.





All client data securely stored and viewed in VALD Hub

VALD Hub also allows you to generate and print your reports, which can be sent to clients or third parties.

VALD Hub securely stores all your client's VALD data, which helps with reducing your admin burden.

Print a PDF report directly from VALD Hub and provide it to your client or referrer.

HARDWARE

	DYNAMO PLUS	DYNAMOLITE		
Load capacity (Compression)	100kg compression capacity	100kg compression capacity		
Load capacity (Tension)	200kg tension capacity			
Movement Sensor	9-axis IMU Accelerometer, gyroscope and magnetometer	9-axis IMU Accelerometer, gyroscope and magnetometer		
Display	Inbuilt OLED screen	_		
Battery	10 hour battery life	10 hour battery life		

DYNAMOPLUS

The DynaMo Plus attachments enable 300+ tests within a single system.

The Smart Attachments feature quick release mechanisms and are automatically detected using Near Field Communication (NFC) technology.



DYNAMOLITE

The DynaMo Lite fits into a silicone pouch and is supported by comfortable, self-applicable Velcro sleeves and an adjustable strength strap to ensure reliable and accurate testing every time.



Silicone Pouch



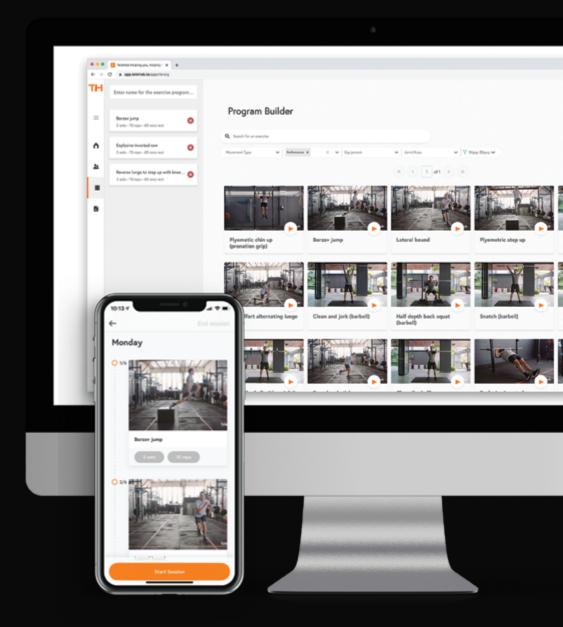
Strength Strap



3 Adjustable Sleeves (Small, Medium and Large)



Soft Shell Travel Case



TELEHAB

EXERCISE PRESCRIPTION APP



Get TeleHab for free at https://app.telehab.io/sign-up

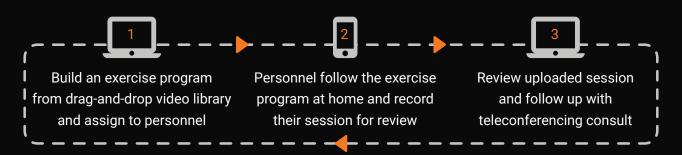
Seamless remote exercise management

Managing personnel exercise programs and completion rates remotely can be challenging. With TeleHab, you can assign personnel exercise programs, monitor their completion rates and review video-recorded exercises.

Guide your personnel, step-up by step-up

Fast, intuitive and easy-to-use, the TeleHab app walks your personnel through their exercises, giving them refreshers and allowing them to upload videos for your review.

How TeleHab works



- ► Library of 6,000 + exercises (and counting)
 Something missing? Let us know and we'll
 film it and add it for you.
- ▶ Simple drag-and-drop program builder No more slow, clunky exercise libraries to struggle through. Just search, drag and drop or choose from a template.
- Powerful, flexible program scheduling Decide whether you want your personnel to complete their program on specific days, at certain times of the day, or whenever they can.
- Improve rehabilitation accountability of your personnel
 Demonstrate with objective evidence if your personnel are trying to rehabilitate

and improve exercise adherence.

► Assign programs instantly

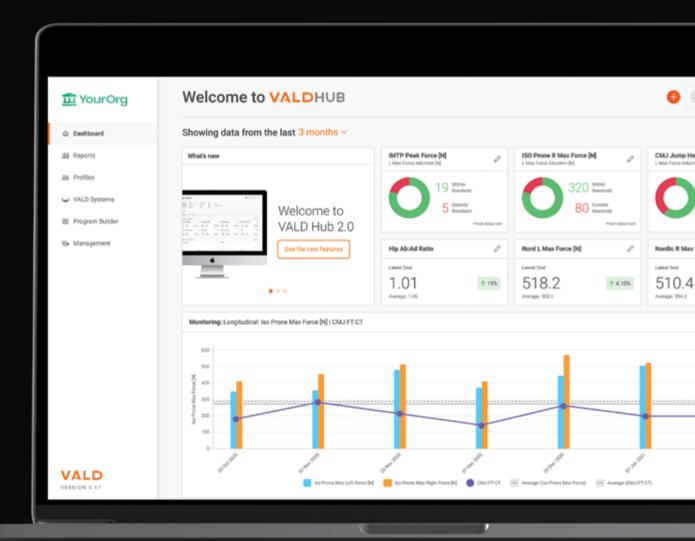
Assign an exercise program to your personnel and it appears in their TeleHab app immediately.

▶ Easy-to-use interface

The TeleHab app is designed to get up and running quickly. Program reminders and scheduling ensure your personnel complete their programs.

▶ Video recording and uploading

Choose whether your personnel should record their sessions. If they do, you'll see videos of each of their exercises uploaded and waiting for you after the session is complete.



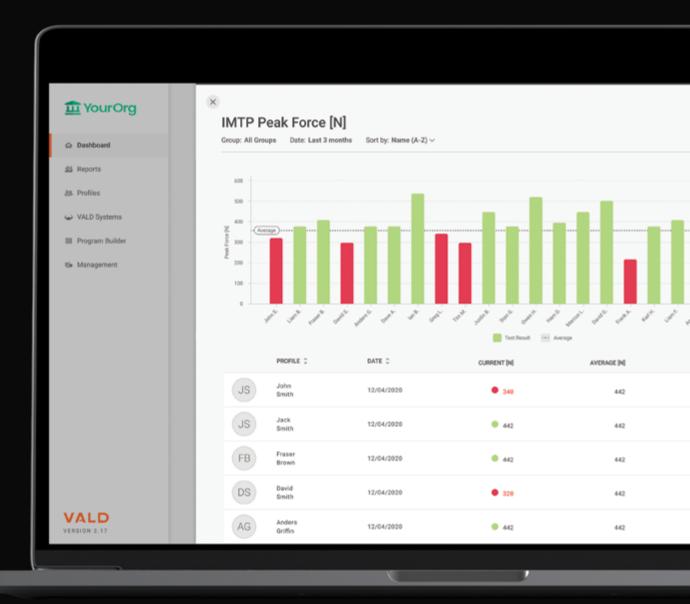
VALDHUB

All your testing data in one place

Compare data across ForceDecks, ForceFrame and NordBord simultaneously and visualise the results instantly within Hub.

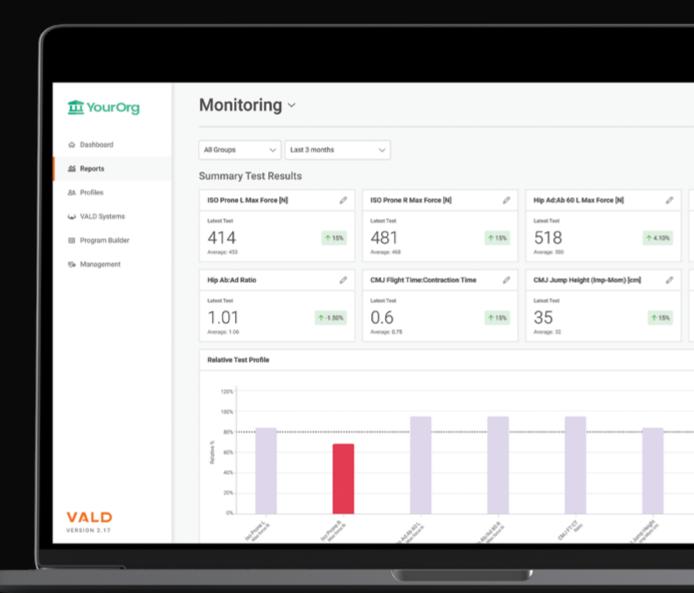
The dashboard provides you with insights into the most relevant test data metrics.

At any time, you can adjust the metric tiles shown on your dashboard. Visual cues and configurable thresholds make it easy to identify how your unit is performing against your chosen metrics. In the dashboard you will also see the latest product news and updates, best practice articles, webinars and more.



Visual cues

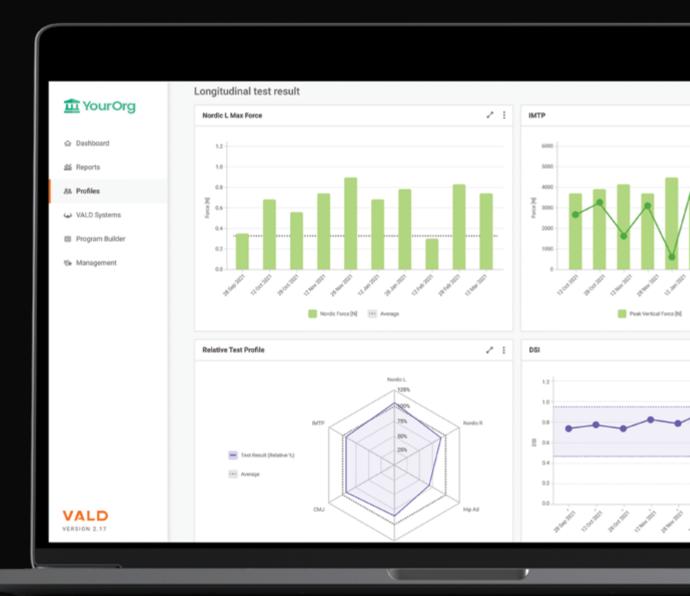
Thresholds can be set for each metric and the dashboard will provide visual cues indicating how many profiles fall within or outside of these thresholds. Click into a given metric to identify exactly who falls where. From there, you can drill down further into a per profile snapshot.



Configurable reports

VALD Hub's reporting allows you to configure reports to display metrics and data visualizations most pertinent to your needs.

The monitoring report allows you to view data from all available systems simultaneously, the metrics from which are completely configurable. You also have the option to review systemspecific reports, as well as a Dynamic Strength Index report.



Deep dive into each profile

Review individual personnel data with just two clicks from the dashboard, gaining instant insight into their performance or rehabilitation progress.

Summarise test data across ForceDecks, NordBord and ForceFrame – all within a single page. View and configure as many test metrics tiles as desired. These tiles display data from your most recent testing sessions, as well as historical averages.

If you can't measure it, you can't improve it.

For more information, contact

INFO@VALD.COM



VALDTACTICAL.COM