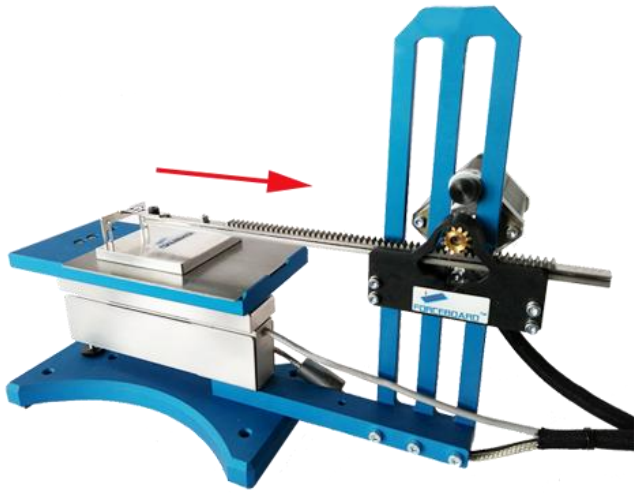
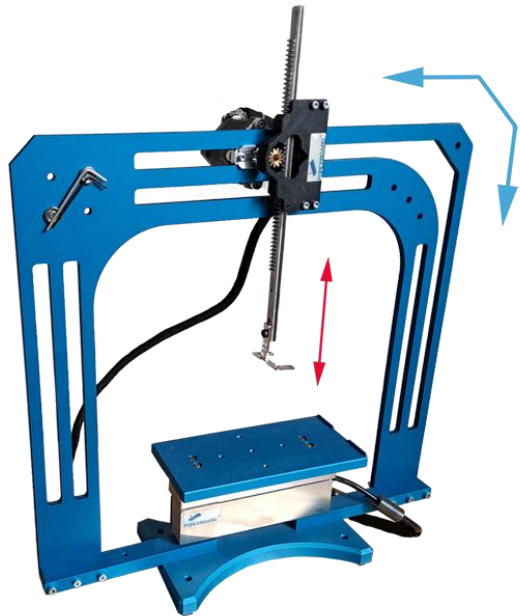


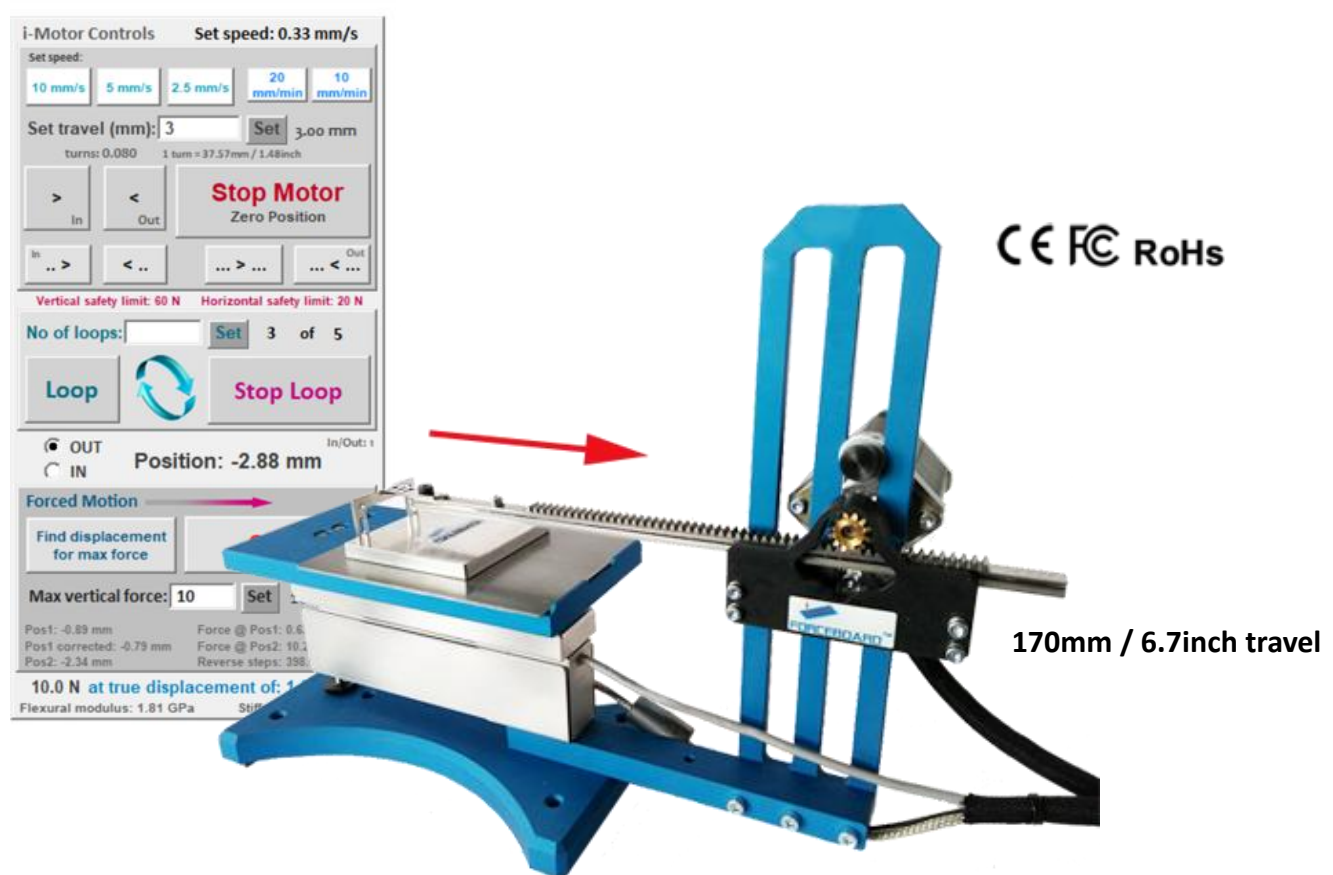
**ForceBoard™** - Desktop friction, wear, tensile/compression, scratch and tactile sensation testing system with full 2D load sensing capability



# Hardware

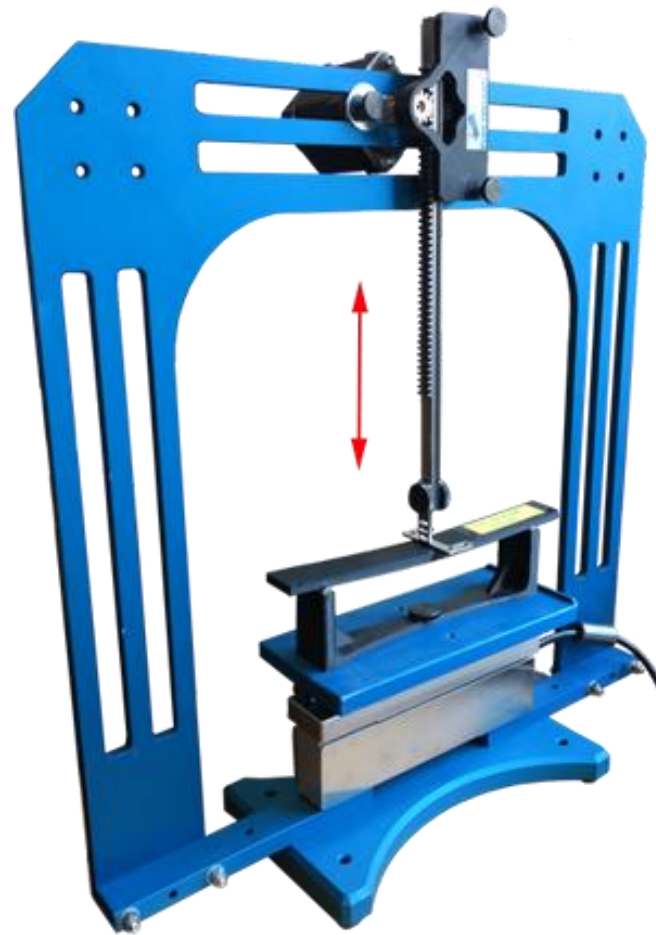


# ForceBoard™ System



- Full 2D force sensing
- Horizontal applications (friction, scratch, linear wear, horizontal adhesion, horizontal tear)
- Standard load capacity: **100N** vertical direction, **50N** horizontal direction
- Portable, USB powered and overload protected
- No maintenance requirements, built in calibration
- Materials: Anodized aluminum & stainless steel
- Outer dimensions: 300 x 300 x 100mm, total weight ~2.3kg / 5lb

# ForceBoard™ MultiSystem



- **Full 2D** force sensing
- Vertical & Horizontal applications (friction, scratch, linear wear, tensile, compression, fatigue, adhesion)
- Standard load capacity: **100N** vertical direction, **50N** horizontal direction
- Portable, USB powered and overload protected
- No maintenance requirements, built in calibration
- Materials: Anodized aluminum & stainless steel
- Outer dimensions: 400 x 400 x 100mm, total weight ~2.3kg / 5lb

# ForceBoard™ Wear Tester



CE FC RoHs

- Block vs ring
- Pin vs disc
- Lubrication trays are included
- Hanging weight or spring loaded
- Portable, 7kg / 15lb



ForceBoard™ Wear Tester is a very cost efficient and easy to use **block on ring and pin on disc** wear and lubrication/additive tester with real time friction force measurement and friction data recording for any period of time with speed controller (up to 230rpm).

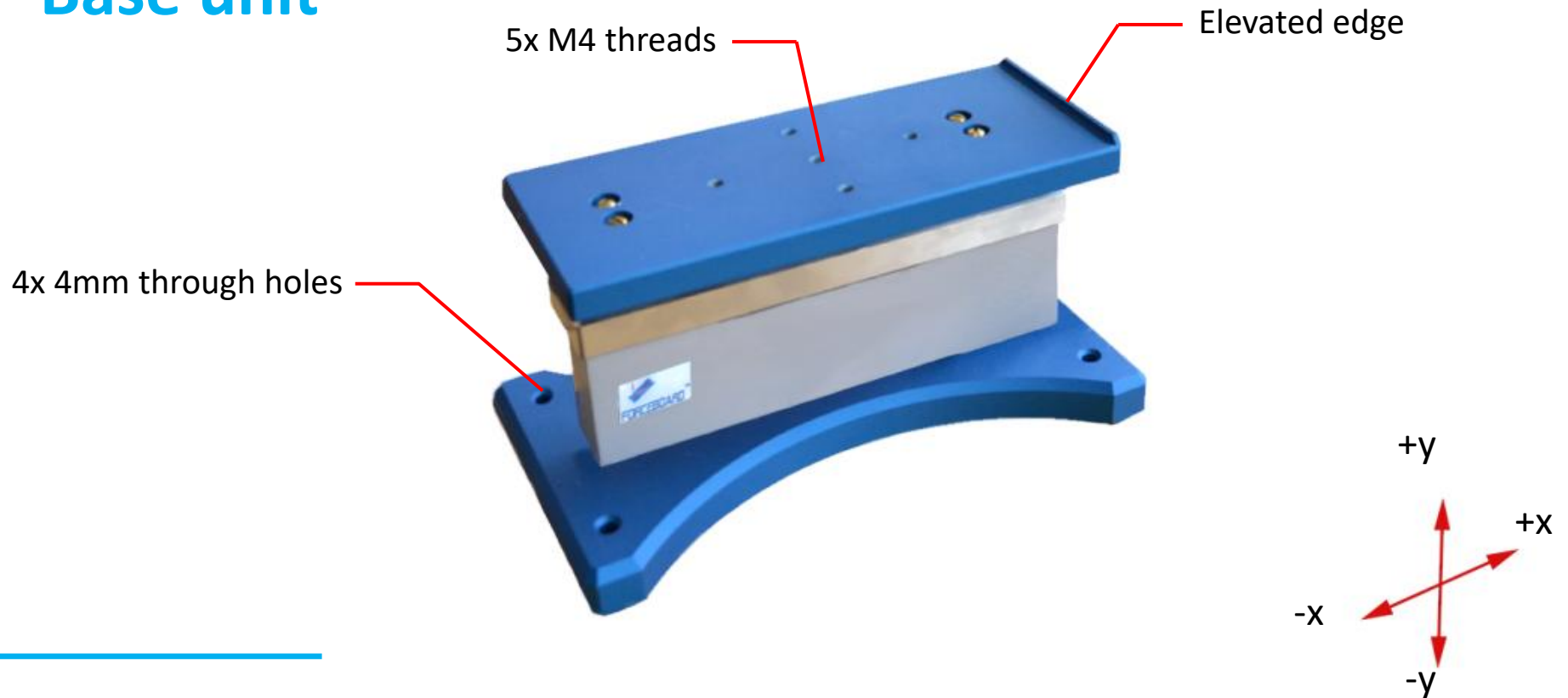
**Rotating carrier component which connects to you rotating test sample** can easily be made to customer's specification via precision CNC machining.

# ForceBoard™ Tactile Tester



- **World unique functionality**
- Built in finger position tracking and full 2D force sensing
- Standard load capacity: **50N** vertical direction, **10N** horizontal direction
- Portable, USB powered and overload protected
- No maintenance requirements, built in calibration
- Materials: Anodized aluminum & stainless steel
- Outer dimensions: 300 x 130 x 100mm, total weight 1.7kg / 3.8lb

# ForceBoard™ Base unit



- **Patented 2D (+/-x, +/-y)** force sensing
- Standard load capacity: **100N** vertical direction, **50N** horizontal direction (capacities can be modified)
- Portable, USB powered and overload protected
- **Zero** maintenance requirements
- Materials: Anodized aluminium & stainless steel
- Outer dimensions: 180(l) x 110(w) x 100(h) mm, total weight 1.6kg / 3.5lb

# Software

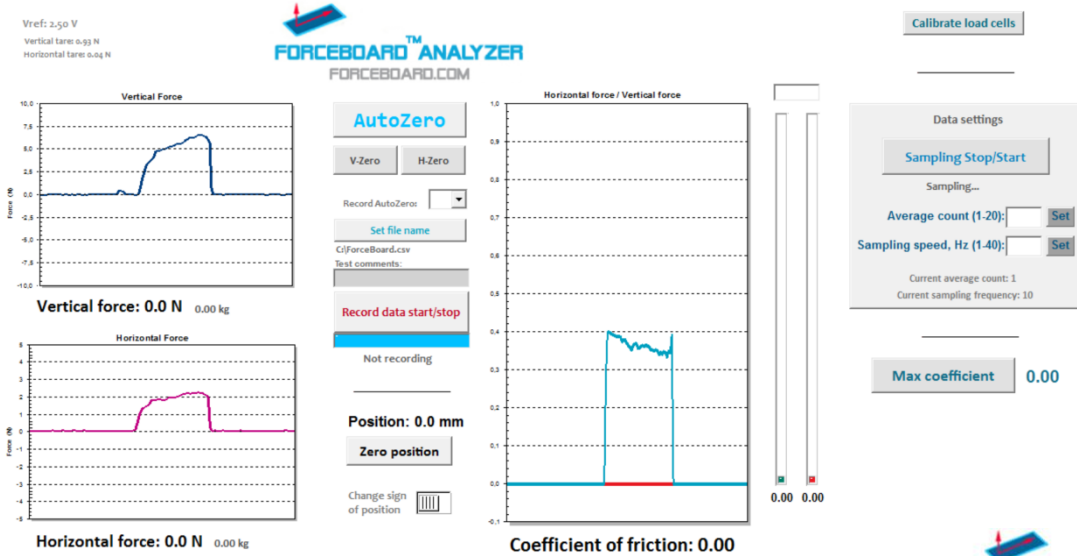
**Note: If you have special requests on the software we can solve that for you.**



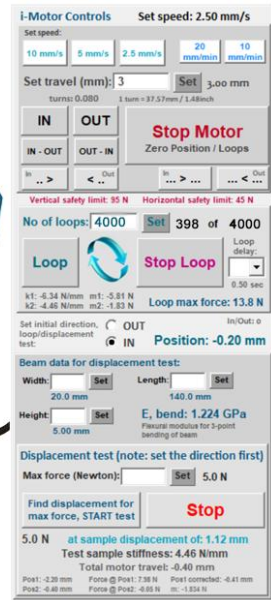
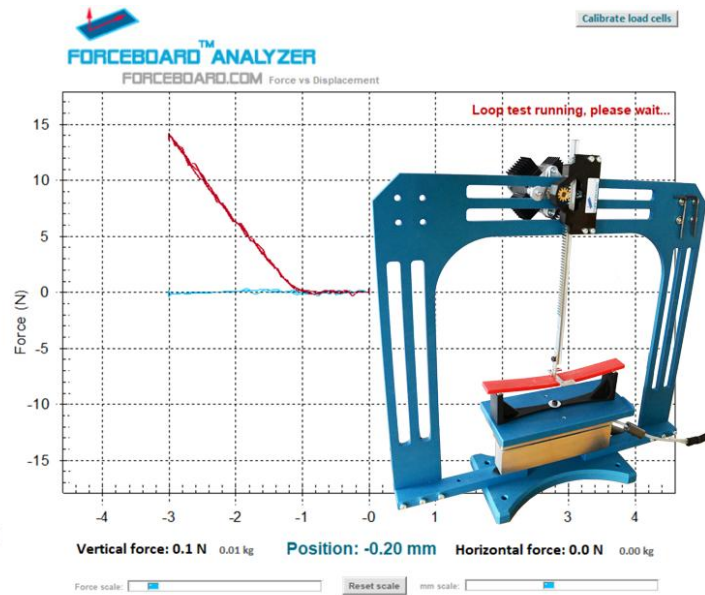
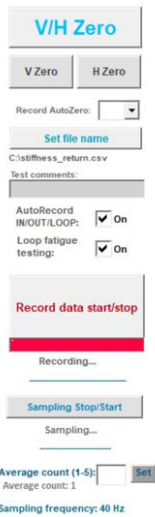
# ForceBoard™ Analyzer

Software available in 2 versions!

- Adjustable sampling frequency
- Optional averaging
- Record data to Excel or Matlab
- Built in load cell calibration
- Open interface
- Can upload results to server

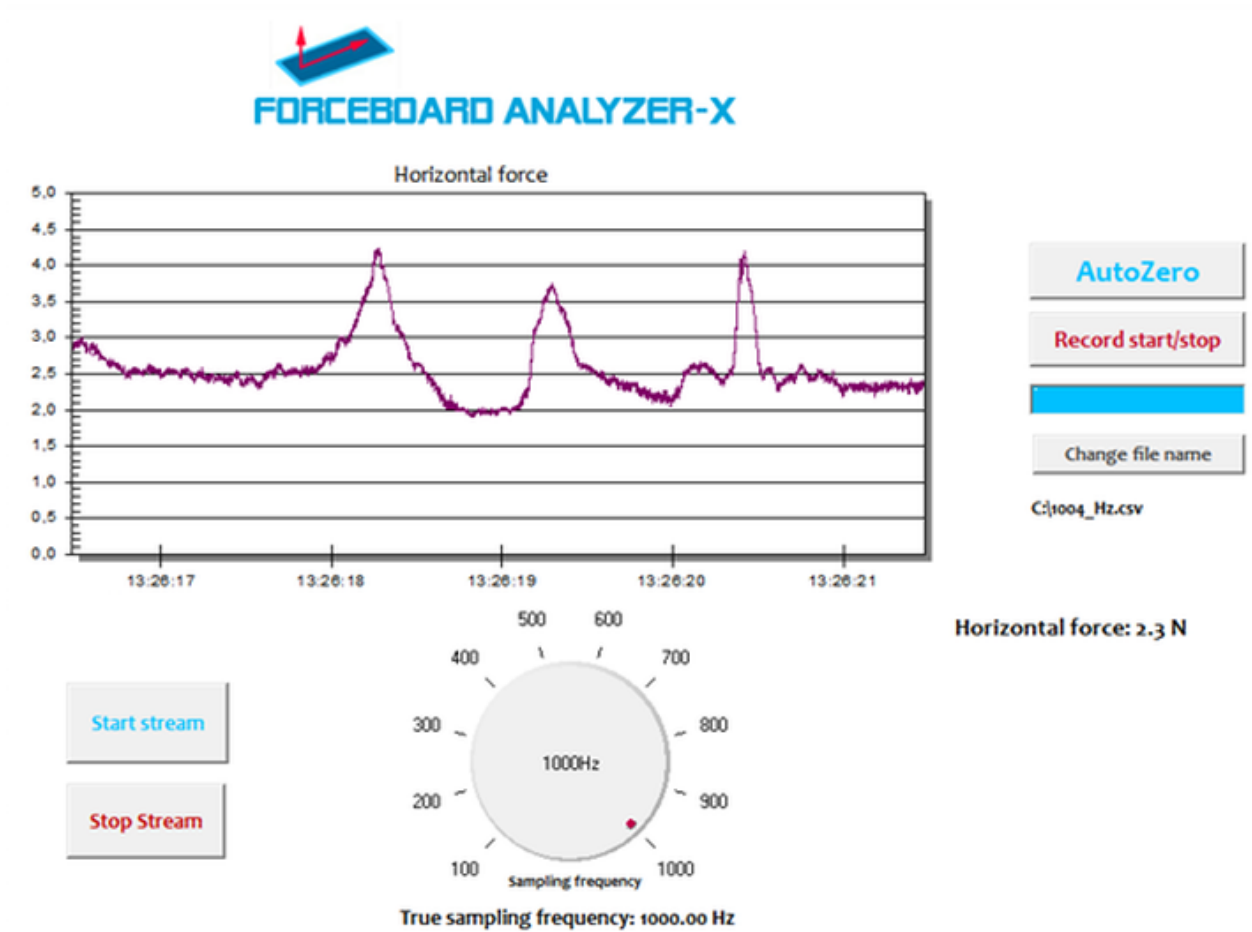


Force & friction vs time



# ForceBoard™ Analyzer-X

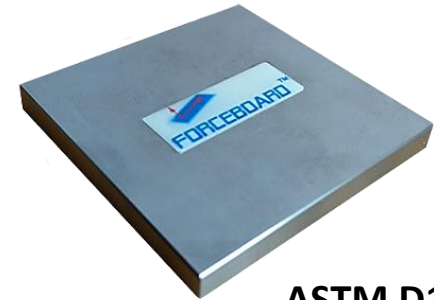
Software for high speed recordings in the horizontal direction



# ForceBoard™ Accessories



**Pivot loading arm** for friction, scratch & linear wear testing



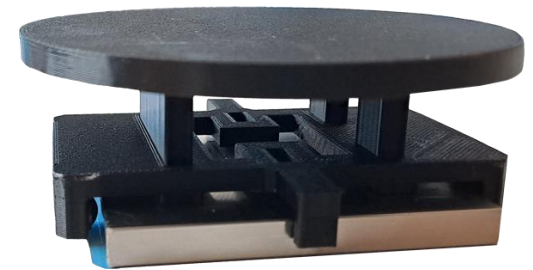
**ASTM D1894 steel weight** for [friction testing](#)



**Multi-Gripper** (delivered with [ForceBoard System](#) & [MultiSystem](#))



**3 point bend fixture** for [flexural modulus testing](#)

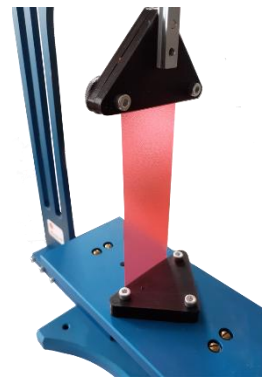


**Loading platform** for [friction testing](#)



**HRC-3 Rockwell Diamond probe**, 200µm tip radius for [scratch testing](#)

**Triangular clamps** for [thin film stiffness testing](#)

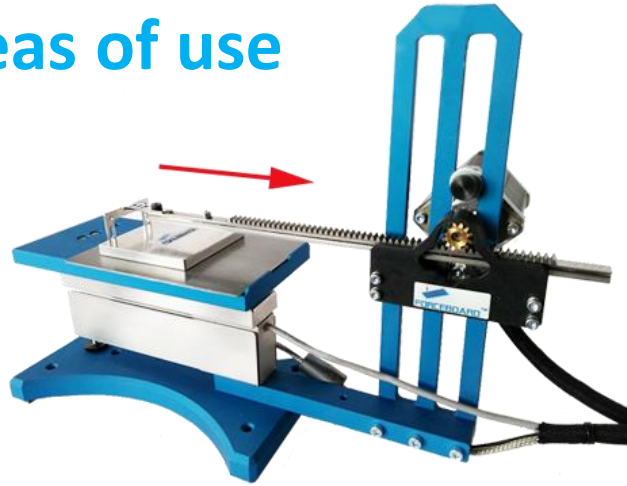


# Areas of use

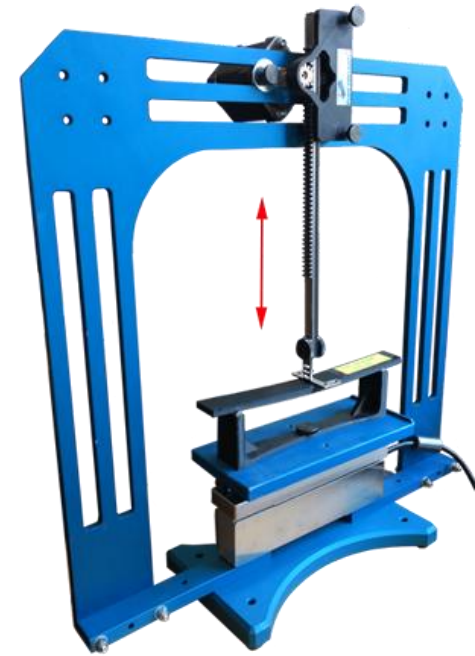
# ForceBoard™ areas of use



Tactile friction



Static / dynamic friction



Tensile / compression / fatigue



Rotating wear / lubricants



Scratch / linear wear

## **Friction testing (static / dynamic)**

General 2D force measurements

## **Tensile testing (0 to +/- 100N)**

Three point flexural testing

## **Wear testing (block-on-ring) + linear**

Torque testing

## **Tactility & tactile friction testing**

Surface coating optimizations

## **Push / Pull testing**

Adhesion testing (0-180 degrees)

## **Position measurement / sensing**

Portable live testing / experiments

## **Catheter testing**

Syringe testing

## **Material / tissue tolerance to loading**

Biomechanics & Biotribology

## **Fatigue testing**

Material flexibility / compliance

## **Contact modeling**

Parameters for finite element simulations

## **Physics / Mechanics teaching**

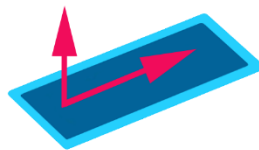
Scratch testing

## **Custom Test Automation applications**

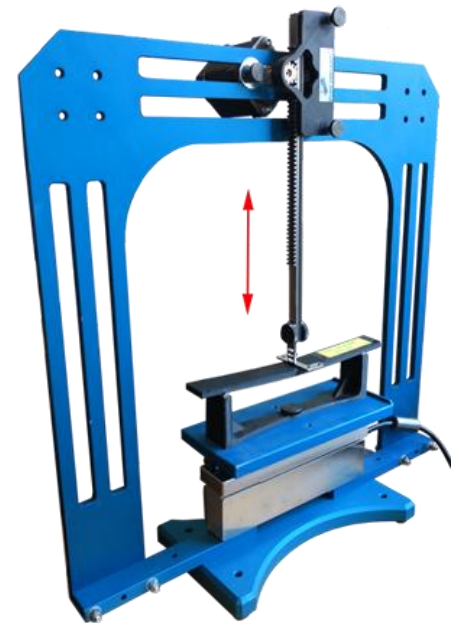
Programmable test sequences



<b>Data communication interface</b>		<b>USB 2.0</b>
<b>Power supply</b>		100-240 VAC / 50-60Hz, 2.5A max
<b>Power supply cable</b>		C13 (with ground connector pin)
<b>Weight</b>	ForceBoard	1.6kg / 3.5lb
	i-Motor	0.5kg / 1.1lb
	Frame	0.2kg / 0.45lb
	RigidFrame	0.8kg / 1.8lb
	Electrical box (delivered with i-Motor & Wear tester)	2.1kg / 4.6lb
	Wear tester, block on ring & pin on disc	10kg / 22lb
<b>Dimensions</b>	ForceBoard with RigidFrame [mm]	360(W) x 380(H) x 110(D)
	Electrical box [mm]	230(W) x 60(H) x 220(D)
<b>Operating temperature</b>	0-40°C / 32-104°F	
<b>Operating environment</b>	Office or laboratory use, no condensation	



# FORCEBOARD™



[Contact us](#) or your local representative and order today!

[www.ForceBoard.com](http://www.ForceBoard.com)