SYDOR TECHNOLOGIES



BIOKINETICS BALLISTICS YAW SENSOR

COMPLEX MEASUREMENTS—CRITICAL RESULTS

FEATURES

- 40% faster than traditional Yaw cards
- Ease of use and traceability
- Image based solution that can be used in close proximity to projectile
- Detection of bullets, FSPs, RCCs

APPLICATIONS

- Ballistic Gel Testing
- Dynamic Impact Imaging
- Impact Testing for Body Armor
- Real-Time Evaluation
- Yaw Angle Measurement of Projectiles

ABOUT THE BIOKINETICS BALLISTICS YAW SENSOR

Projectiles leaving the muzzle of a firearm fly with a non-steady angle of attack, resulting in a deviation between the projectile's axis of symmetry and its line of travel. Yaw information provides a significant amount of information about the projectile's aerodynamics. Projectile yaw can significantly affect the penetrative power of armor piercing rounds.

International armor standards require the measurement of Yaw to ≤ 3° for rifle threats or ≤5° for fragment and handgun threats.

Historically, a simple Paper Yaw Cards have been the measurement mode of choice, despite their outdated simplicity.

Biokinetics manufactures a cost-effective and accurate alternative to this antiquated solution, the Biokinetics Yaw Measurement System (BYS). This complete system is used for yaw angle measurements of bullets and fragment simulating projectiles relative to the line of fire. The system includes a camera system for detection, and specialty software engineered to process yaw measurements.

Together, the system is used to capture projectile images and calculates yaw angles. The BYS can acquire data with measurements taken as close as 10 cm from the target, at accuracy's within 0.5 degrees. With automated analysis, image storage, and traceable system accuracy, BYS provides time-saving features for the measurement of bullets, FSPs, and RCCs. Users found Biokinetics' BYS to be 40% faster than traditional Yaw cards.

Biokinetics can supply a floor-mounted support stand for repeatable positioning of the BYS and flexibility to access the target area. The systems support stand has 4 axes of adjustment and can be used with an optional spall protector bracket and plate. The BYS is certified to traceable standards to comply with ISO

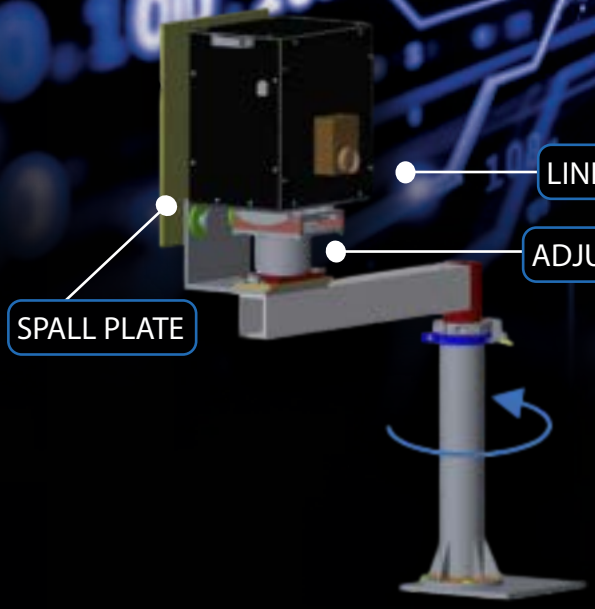
PERFORMANCE SPECIFICATIONS

- Speed Range: 300-1800 m/s
- Angular Accuracy: ± 0.5 °
- Exposure Time: >500 ns
- Software: Ballistic Yaw Sensor Software
- Sensor: Machine vision CMOS camera, monochrome, 5 Megapixel
- Projectile Speed Selection: Selectable in steps of 1 m/s
- Compatible Projectiles: Fragments: FSP, RCC 17-64 grain, Bullets: < 50 caliber
- Light Source: COB LED
- Computer & Interface: Computer (Windows OS) with GigaE adapter

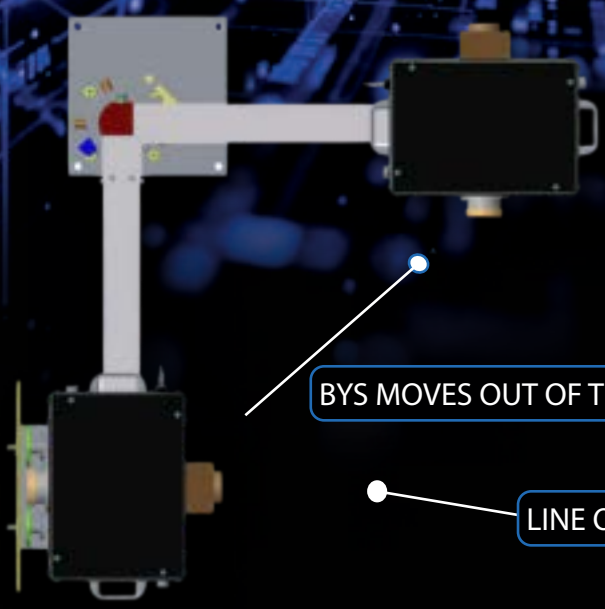
PHYSICAL & ELECTRICAL

- Dimensions (W x D X H): BYS with adjustable base: 362 x 260 x 587 mm (14.2" x 10.2" x 23.1"), 22 kg (48.5 lbs)
  BYS with stand, base & spall plate: 1035 x 406 x 1355 mm (40.7" x 16.0" x 53.3"), 66 kg (145.5 lbs)
- Alignment: Integrated alignment guage requires inbore laser (laser not provided)
- Placement: Can be placed 10 cm from target. Spall protection may be required. 50 mm (2 in) diameter entry opening
- Electrical: 120 VAC @ 60 Hz / 240 VAC @ 50 Hz, 100 W max

SIDE VIEW



TOP VIEW



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