

# MANUAL BASIC FALLING DART IMPACT TESTER

The Ray-Ran **Manual Basic Falling Dart Impact Tester** provides a basic method for determining the energy that causes thin flexible materials such as plastic film, paper and composite sheets to fail under specified conditions of impact from a free-falling dart. The energy required to cause Initial Failure to the test specimen is expressed in terms of the darts weight which would result in the failure of 50% of specimens being tested. The instrument complies with the ASTM D1709 Method A&B and ISO7765 part 1.

The methods of holding the test specimen and releasing the dart are designed so that they may be accurately repeated for each test performed. Test specimens are simply clamped in the unique two-piece clamp system which gives a constant tension across the surface area of the specimen ensuring test repeatability. A dart of a known weight is then allowed to free fall and hit the sample. The addition or removal of known weights determine the Initial failure of the sample.

To comply with the relevant test standards, a fixed dart drop height of 660mm and 1½" spherical radius tup (method A) and optional 1524mm height and 2" spherical radius (method B) are used. The dart release

mechanism is pneumatically actuated and requires the use of both hands to release the dart to ensure maximum operator safety. A clamp guard is also supplied to ensure the operators safety from falling and rebounding darts which can be removed for easy dart retrieval.

The apparatus comes supplied with digital counters to record Fail and non fails and keep track of the total number of tests conducted.

Fails and Non fails are manually plotted on graph paper to give the test result.

An optional floor mounted stand and method B testing kit are available.



## MANUAL FALLING DART IMPACT TESTER (RR/FDT-MB)

### SPECIFICATIONS (SUPPLIED AS STANDARD)

- Conforms to ISO 7765 and ASTM D1709 methods A
- Bench mounted
- Pneumatically operated
- Simple set up and operation
- Low maintenance.
- Unique constant tension sample clamping
- 2 hand safety operation for clamp and dart release
- Fixed height assembly 0.66mtrs
- Method A 1.5" aluminium tup and weight set.
- Set of 2 x 5g, 8 x 15g, 8 x 30g, 8 x 60g weights
- Fail, non-fail test counters
- Optional ancillaries
- Method B test kit (includes) - 2" stainless steel tup, weight set 2 x 15g, 8 x 45g, 8 x 90g, 1524mm height post, remote dart clamp switch.
- Floor mounted stand
- Phenolic, Stainless steel, Aluminium, Composite Darts
- Custom Darts on request

### WEIGHTS & DIMENSIONS: RR/FDT-MB

Net Weight (kg)	50
Width (cm)	53
Depth (cm)	72
Height (cm)	110 260 (with optional method B kit)
Voltage: 240V 60 Hz / 110v 50Kz	