SmartBond™

ITW DYNATEC'S ADHESIVE TESTING UNIT IS THE PERFECT SOLUTION TO DETERMINE ADHESIVE SPECIFICATIONS IN THE FORMULATION- AND PRODUCTION PROCESS AS WELL AS TO REGULARLY PROOF THEIR CONSITENCY, WITH A FAST AND AUTOMATED BATCH TEST SYSTEM. THE FULLY AUTOMATED TEST PROCEDURE IS HIGHLY EFFECTIVE AND PROVIDES EXACT AND REPEATABLE TEST RESULTS, BY ELIMINATING MANUAL INACCURACIES.

RELIABILITY
Complete automatization guarantees quick and easy testing with reliable results and digital documentation.

PERFORMANCE
Choseable parameters for open time, adhesive amount and bond-strength makes it the ideal tool to save cost and time, in R&D and QM departments.

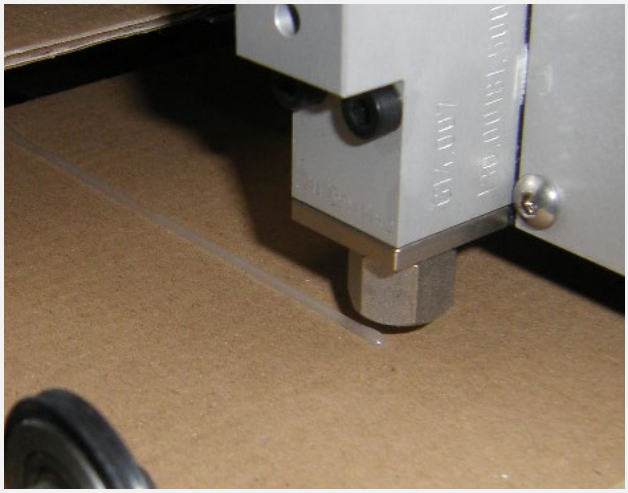
SIMPLICITY
Compact dimensions and Plug-N-Play design makes it the perfect choice, also for smaller laboratories.

APPROVED PARAMETERS, RAPID RESULTS. LEAVE NOTHING TO CHANCE.

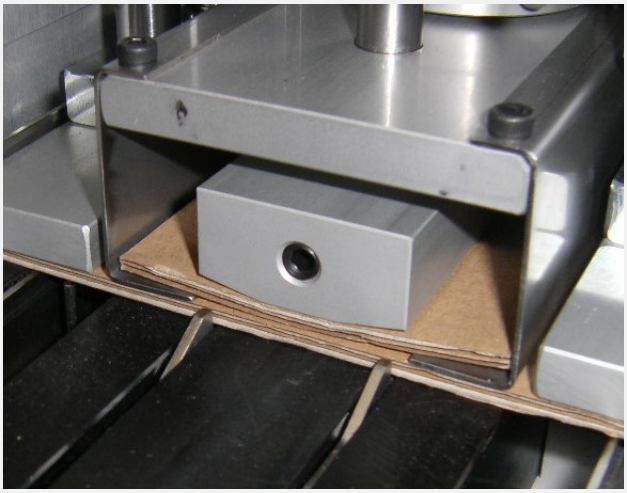
During the development and application of adhesives, many important parameters are actually being tested only visually and manually, making it almost impossible to reliably determine the important ”open-time”. But reproduceable test results however requires approved and documented specifications of all adhesive parameters.

For this purpose, ITW Dynatec has developed an adhesive test unit which provides reliable results in a very short time, even for larger test series, especially during tests of hot melt adhesive specifications. This literally saves time and money during the development, formulation or even the phase of patenting. In addition it increases the reliability of the production process and leads to distinct application references.

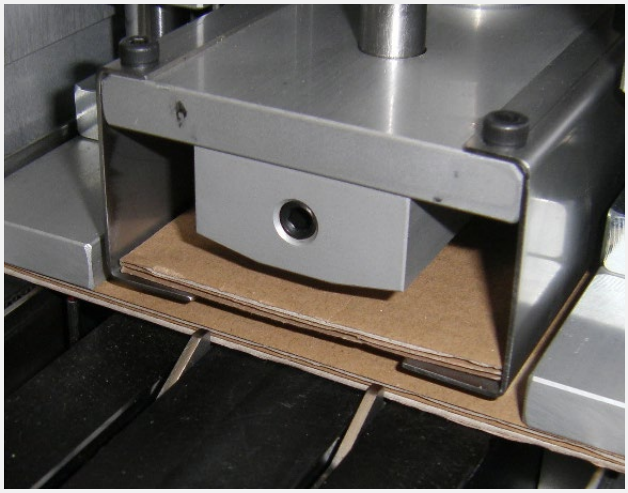
AN EXAMPLE OF AN ADHESIVE TESTING PROCESS



Application of an adhesive (hot melt) bead to the dedicated testing cardboard.



Compression of both cardboards with parameters choosen and set by the user.



Monitored separating of both cardboards.

Ejection of the lower cardboard for visual examination.

DETERMINATION OF THE ADHESIVE'S OPEN-TIME

The unique SmartBond™ adhesive test system enables the operator to freely choose any time-delay, before pressing the two cardboards together. After the, also variably entered, pressing time is over, the cardboards will immediately be torn apart and the measured traction-force is automatically recorded. Comparing various time-delays, before pressing, with the resulting bond-strengths allows exact determination of the optimal "Open-Time", for each specific adhesive. Once all parameters are determined, SmartBond™ can easily be used to assure the efficient and repeatable control of these parameters, for each production batch.

DETERMINATION OF THE ADHESIVE'S TRACTION-FORCE

The traction-force can be determined in two versions. Firstly, the test can be carried out with an immediate traction measurement. The two paperboards will be pressed, torn apart and the traction will be determined immediately. Secondly, the test can be carried out without an immediate traction measurement. Two paperboards will be pressed but not torn apart and will be taken out manually from the pressing mechanism. After a desired period of time these paperboards will be inserted again into the pressing mechanism, torn apart and the traction will be determined.

ADHESION

Basically the usage of various testing substrates is possible. Maximum dimensions of the cardboards should not exceed 160 x 75 x 3 mm. The tension-compression load cells are capable for a maximum tensile force of 500 N. The adhesion, as well as the other variable parameters can be tested with the standard cardboard, as well as boards made of plastic or metal-material.

ADJUSTABLE AND DETERMINABLE PARAMETERS

- Open time of the adhesive
- Length of adhesive bead up to max. 140 mm
- Bonding pressure for the lamination of the cardboards
- Maximum traction-force of the lamination

TECHNICAL DATA

PLC-Controller	S7 with self-explanatory programming
Dimensions of test-cardboards	160 x 75 x 3 mm
Tension-compression load cells	max. 500 N
Height	1,350 mm
Depth	600 mm
Width	840 mm

ITW Dynatec®

THE NEXT LEVEL OF TECHNOLOGY

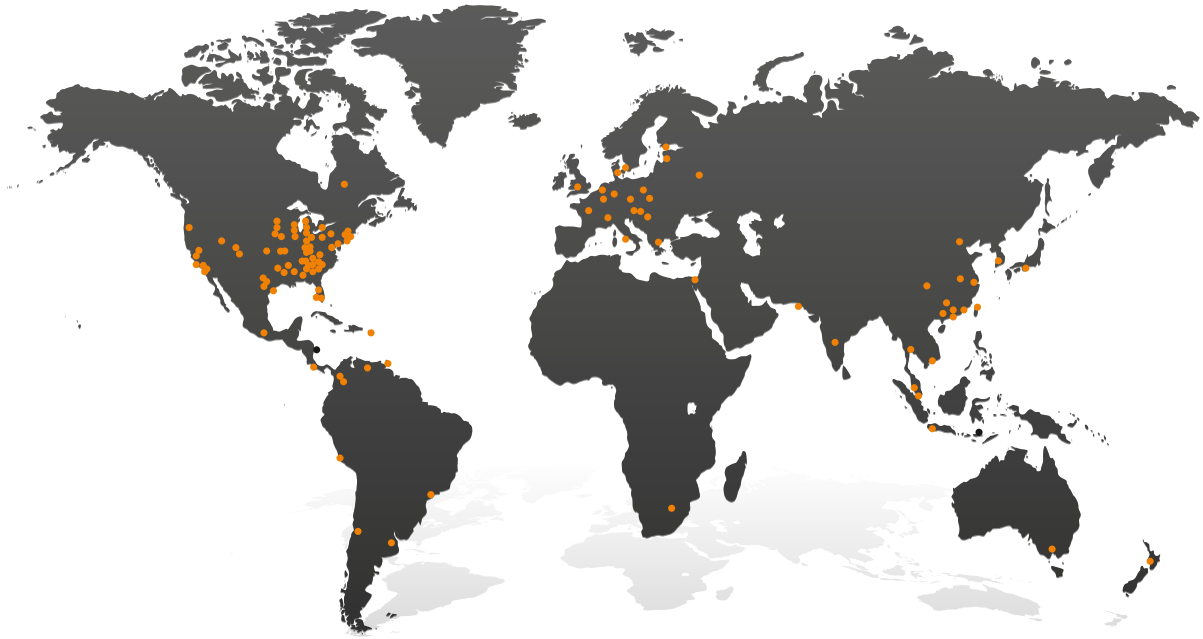
WITH MORE THAN 50 YEARS OF INDUSTRY EXPERIENCE AND EXPERTISE, ITW DYNATEC IS RECOGNIZED AS A GLOBAL LEADER IN THE DESIGN AND MANUFACTURING OF INNOVATIVE HOT MELT ADHESIVE APPLICATION SYSTEMS FOR VARIOUS INDUSTRIES SUCH AS DISPOSABLE HYGIENE PRODUCTS, AUTOMOTIVE AND PACKAGING.

ITW Dynatec's consultative customer approach to selecting products and solutions delivers outstanding services and support from its knowledgeable and responsive service and sales teams. Our best-in class solutions replace conventional application technologies with superior methods that provide a significant reduction in adhesive consumption, fast machine-changeover and process simplification. Our mission is to help customers manufacture superior products with less waste, improved quality and reduced consumables to maintain the flexibility to meet changing market demands.

For patented hot melt adhesive application technology, high-quality reliable equipment, 24/7 customer support and unmatched value, ITW Dynatec isn't just the smart choice... it's the only choice.

WORLDWIDE SERVICE AND SUPPORT NETWORK

- Global Sales and Service Network
- 130 sales and service facilities in over 120 countries.



LOCATIONS

Americas
ITW Dynatec
31 Volunteers Drive
Hendersonville, TN 37075
Phone: +1.615.824.3634
Fax: +1.615.264.5248
info@itwdynatec.com
www.itwdynatec.com

China
ITW Dynatec Suzhou
Unit 2, B1 Building
No. 9 Weixin Road
SIP, Suzhou, China 215122
Phone +86.512.6289.0620
Fax +86.512.6289.0621
info@itwdynatec.cn
www.itwdynatec.cn

Japan
ITW Dynatec K.K
Flos Kamata
26-11, Nishikamata 7-chome
Ota-ku, Tokyo 144-0051, Japan
Phone: +81.3.5703.5501
Fax: +81.3.5703.5505
info@itwdynatec.co.jp
www.jp.itwdynatec.com

Europe, Middle East and Africa
ITW Dynatec GmbH
Industriestraße 28
40822 Mettmann, Germany
Phone: +49.2104.915.0
Fax: +49.2104.915.111
info@itwdynatec.de
www.itwdynatec.de

France
ITW Dynatec Tenplus
ZI Croix de Raville
28500 Chérisy, France
Phone: +33.237.6256.47
Fax: +33.237.6256.40
info@itwdynatec.fr
www.itwdynatec.fr

CE

DNV ISO 9001 REGISTERED FIRM