proceq

DY-2 FAMILY
PULL-OFF TESTING

CONSTRUCTION

made in switzerland
www.proceq.com

The DY-2 family of automated pull-off testers covers the complete range of pull-off applications with unmatched ease of operation and a unique capability to store a complete record of the test.

Pull-off testing is one of the most widely used test methods in the construction industry. This is reflected in the huge number of standards dedicated to the method.

It has long been known that one of the major influences on the result of a pull-off test is the operator influence in the application of a constant load rate. The DY-2 with its integrated, feedback controlled motor removes this variable completely, by providing a fully automated test at a constant load rate which can be verified.

The DY-2 is further unique in that it records every single test parameter required by the specification.

- Time and date of the test
- Test disc size
- Maximum load applied
- Automatic calculation of bond strength
- Applied load rate with graphical record
- Complete time of test
- Failure mode

For the very first time, the operator is able to provide a complete record of the pull-off test, proving that the test was carried out in accordance with the applicable standard.

Application Range

Three versions of DY-2 are available differentiated by maximum pulling force. This covers the complete range of pull-off applications (examples for Ø 50mm test discs):

	Working Range	
	Tensile Force	**Test Disc Ø 50mm**
DY-206	0.6 - 6 kN	0.3 - 3.1 MPa
	135 - 1349 lbf	44 - 443 psi
DY-216	1.6 - 15.5 kN	0.81 - 7.8 MPa
	360 - 3485 lbf	118 - 1145 psi
DY-225	2.5 - 25 kN	1.3 - 12.7 MPa
	562 - 5620 lbf	185 - 1847 psi

DY-206 has increased accuracy for low strength applications such as testing adhesive strength of mortars and renders. DY-216 covering most applications. DY-225 for very high strength applications such as testing of fibre reinforced polymers bonded to concrete structures or testing the bond strength of repair and overlay materials.

Applicable Standards

To further illustrate the wide range of applications, DY-2 conforms to all of these standards: EN 1542, EN 1015-12, EN 1348, ISO 4624, BS 1881 Part 207, ASTM D4541, ASTM C1583, ASTM D7234-05, ASTM D7522, ZTV-SIB 90.

Additionally, most standards state an accuracy requirement. The DY-2 is calibrated according to EN ISO 7500-1 Class 1 and thereby exceeds the accuracy requirements specified in any of the standards listed above.

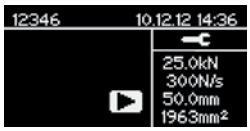
Simple Operation

Select UNIT

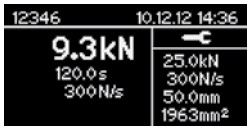
Select size of TEST DISC

Select LOAD RATE

Start TEST

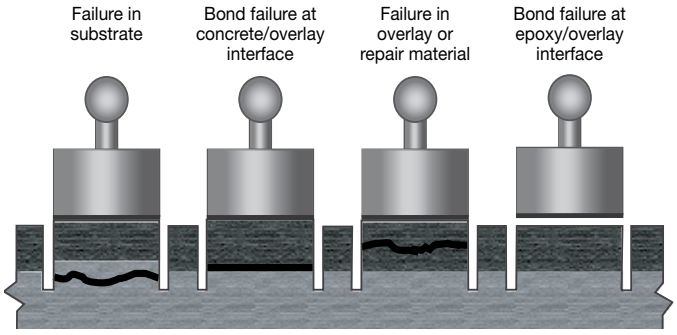


RESULT

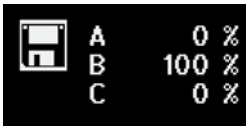


Failure Mode Reporting

Most pull-off testing standards require the operator to record the mode of failure. DY-2 is unique in that it allows this information to be saved along with the test result.



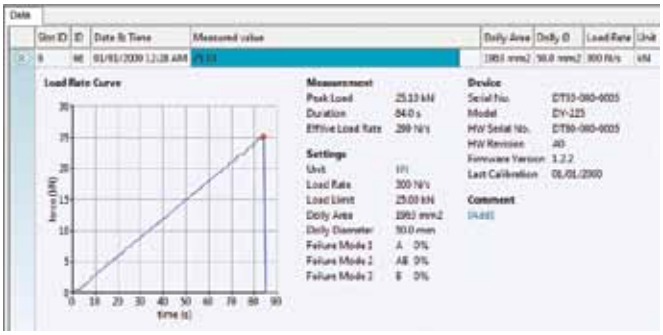
For example „B 100%“ indicates a complete failure in the overlay or repair material.



Complete Report of Load Rate: DY-Link Software

DY-2 provides documentary proof that the test was actually carried out with the specified load rate.

The load rate curve is saved along with the test results and may be downloaded to a PC for reporting, or it may also be viewed in real time if the DY-2 is connected to a PC during the test.



Complete Range of Test Discs

Depending on the application and material under test, the standards specify a wide range of test disc sizes. Proceq provides a complete range. The full list can be seen on the next page.

Ordering Information

DY-2 Units

PART NO.	DESCRIPTION
346 10 000	DY-206 Pull-off tester up to 6 kN (1349 lbf) including draw bolt M10, test disc aluminum Ø 50mm/M10, charger with USB-cable, software, operating instructions, calibration certificate and carrying case
346 20 000	DY-216 Pull-off tester up to 15.5 kN (3485 lbf) including draw bolt M10, test disc aluminum Ø 50mm/M10, charger with USB-cable, software, operating instructions, calibration certificate and carrying case
346 30 000	DY-225 Pull-off tester up to 25 kN (5620 lbf) iincluding draw bolt M10, test disc aluminum Ø 50mm/M10, charger with USB-cable, software, operating instructions, calibration certificate and carrying case

Test Discs and Accessories

PART NO.	DESCRIPTION
346 10 500S	Test disc steel, Ø 50mm/M10, set of 10
346 10 501S	Test disc aluminum, Ø 50mm/M10, set of 10
346 10 502S	Test disc aluminum, Ø 20mm/M10, set of 10
346 10 503S	Test disc aluminum, 50x50mm/M10, set of 10
346 10 504S	Test disc aluminum, 40x40mm/M10, set of 10
346 10 505S	Test disc aluminum, Ø 100mm/M10, set of 3
346 10 506S	Test disc aluminum, 100x100mm/M10, set of 3
346 10 507S	Test disc aluminum, Ø 75mm/M10, set of 5
346 10 530	Adapter plate for large test discs
346 10 251	Battery pack complete

Technical Specifications

Accuracy and Resolution	EN ISO 7500-1 Class 1 (±1%)
Memory capacity	100 measurements
Battery capacity	1500 mAh, 3.7V (min. 80 measurements)
Charger connection	USB type A (5V, 500mA)
Weight	4.5 kg
Dimensions of housing	109 x 240 x 205.5 mm
Operating temperature	-10 to 50°C (32 to 122°F)
Storage temperature	-10 to 70°C (14 to 158°F)

Service and Warranty Information

Proceq is committed to providing complete support for the DY-2 testing instrument by means of our global service and support facilities. Furthermore, each instrument is backed by the standard Proceq 2-year warranty and extended warranty options.

Standard warranty:

- Electronic portion of the instrument: 24 months
- Mechanical portion of the instrument: 6 months

Proceq SA
Ringstrasse 2
8603 Schwerzenbach
Switzerland
Phone: +41 (0)43 355 38 00
Fax: +41 (0)43 355 38 12
info@proceq.com
www.proceq.com