The Proceq 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):

<table>
<thead>
<tr>
<th></th>
<th>Working Range</th>
<th>Maximum Pulling Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tensile Force</td>
<td>Test Disc Ø 50mm</td>
</tr>
<tr>
<td>DY-206</td>
<td>0.6 - 6 kN</td>
<td>0.3 - 3.1 MPa</td>
</tr>
<tr>
<td></td>
<td>135 - 1349 lbf</td>
<td>44 - 443 psi</td>
</tr>
<tr>
<td>DY-216</td>
<td>1.6 - 16 kN</td>
<td>0.81 - 8.1 MPa</td>
</tr>
<tr>
<td></td>
<td>360 - 3597 lbf</td>
<td>118 - 1182 psi</td>
</tr>
<tr>
<td>DY-225</td>
<td>2.5 - 25 kN</td>
<td>1.3 - 12.7 MPa</td>
</tr>
<tr>
<td></td>
<td>562 - 5620 lbf</td>
<td>185 - 1847 psi</td>
</tr>
</tbody>
</table>

Note: Below the working range, the accuracy is not guaranteed.

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, JGJ126-2000, JGJ144-2004, JGJ110-2008.

Proceq DY-2 is calibrated according to EN ISO 7500-1 Annex C - Alternative Method of Testing Machine Classification.

The software necessary to calibrate the instrument is included in DY-Link.
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.

Failure in substrate
Bond failure at concrete/overlay interface
Failure in overlay or repair material
Bond failure at epoxy/overlay interface

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

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>346 10 000</td>
<td>DY-206 Pull-off tester 6 kN (1349 lbf) including: battery pack, battery charger with USB-cable, test disc aluminium Ø 50mm/M10, draw bolt M10, torx screwdriver, software, operating instructions, certificate of conformity and carrying case</td>
</tr>
<tr>
<td>346 20 000</td>
<td>DY-216 Pull-off tester 16 kN (3597 lbf) including: battery pack, battery charger with USB-cable, test disc aluminium Ø 50mm/M10, draw bolt M10, torx screwdriver, software, operating instructions, certificate of conformity and carrying case</td>
</tr>
<tr>
<td>346 30 000</td>
<td>DY-225 Pull-off tester 25 kN (5620 lbf) including: battery pack, battery charger with USB-cable, test disc aluminium Ø 50mm/M10, draw bolt M10, torx screwdriver, software, operating instructions, certificate of conformity and carrying case</td>
</tr>
</tbody>
</table>

## Test Discs and Accessories

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>346 10 500S</td>
<td>Test disc steel, Ø 50mm/M10, set of 10</td>
</tr>
<tr>
<td>346 10 501S</td>
<td>Test disc aluminium, Ø 50mm/M10, set of 10</td>
</tr>
<tr>
<td>346 10 502S</td>
<td>Test disc aluminium, Ø 20mm/M10, set of 10</td>
</tr>
<tr>
<td>346 10 503S</td>
<td>Test disc aluminium, 50x50mm/M10, set of 10</td>
</tr>
<tr>
<td>346 10 504S</td>
<td>Test disc aluminium, 40x40mm/M10, set of 10</td>
</tr>
<tr>
<td>346 10 505S</td>
<td>Test disc aluminium, Ø 100mm/M10, set of 3</td>
</tr>
<tr>
<td>346 10 506S</td>
<td>Test disc aluminium, 100x100mm/M10, set of 3</td>
</tr>
<tr>
<td>346 10 507S</td>
<td>Test disc aluminium, Ø 75mm/M10, set of 5</td>
</tr>
<tr>
<td>346 10 530</td>
<td>Adapter plate for large test discs</td>
</tr>
<tr>
<td>346 10 251</td>
<td>Battery pack complete</td>
</tr>
<tr>
<td>346 10 550</td>
<td>Fixing kit for vertical and overhead surfaces</td>
</tr>
</tbody>
</table>

## Technical Specifications

- **Max stroke**: 5 mm
- **Calibration accuracy**: DY-216, 225 EN ISO 7500-1 Class 1
  - DY-206 EN ISO 7500-1 Class 2
- **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 (14 to 122°F)
- **Storage temperature**: -10 to 70°C (14 to 158°F)
- **IP classification**: IP54

## 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 warranty and extended warranty options.

- **Standard warranty**:
  - Electronic portion of the instrument: 24 months

Subject to change without notice. All information contained in this documentation is presented in good faith and believed to be correct. Proceq SA makes no warranties and excludes all liability as to the completeness and/or accuracy of the information. For the use and application of any product manufactured and/or sold by Proceq SA explicit reference is made to the particular applicable operating instructions.

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

Made in Switzerland