

The logo for PHARMA TEST features the word "PHARMA" in a bold, dark red, sans-serif font above the word "TEST" in the same style. To the right of the text is a stylized graphic element consisting of a yellow triangle pointing downwards and a dark red circle, partially overlapping the triangle.

PHARMA
TEST

Portfolio Overview
Tablet Dissolution
Testing



Tablet Dissolution Testing

For over 40 years, Pharma Test has been a household name for the development and production of high-value dissolution testing systems for quality testing of tablets, capsules, suppositories, ampoules, bulk materials and other solid dosage formats. We offer a complete product range from manual instruments, offline systems with fraction collectors to online dissolution systems using 21 CFR Part 11 compliant software.

Our foremost priority is to develop products with the quality that you would expect from the “Made in Germany” label – “The German Gründlichkeit”.

THE GERMAN GRÜNDLICHKEIT



PTWS 120D
6-Station Tablet Dissolution Bath

- > 6 stirred positions, excellent access to all vessels
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 120S
6-Station Individual Speed Control Dissolution Bath

- > Individual speed control for all 6 stirred positions
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 820D
8-Station Tablet Dissolution Bath

- > 8 stirred positions, excellent access to all vessels
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



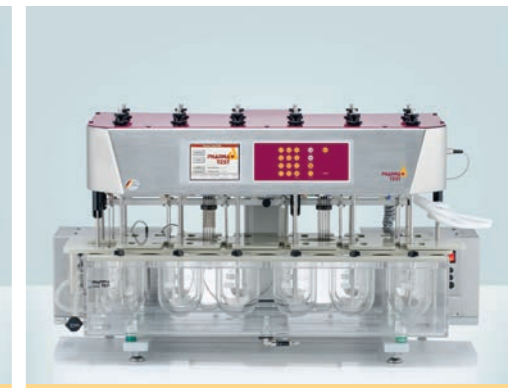
PTWS 620
6+2 Station Tablet Dissolution Bath

- > 8 stirred positions, 6+2 configuration
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 1220
6+6 Station Tablet Dissolution Bath

- > 12 stirred positions, 6+6 configuration: ideal for Biowaiver tests
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS D620
6+6 Dual Drive Dissolution Bath

- > 12 stirred positions, individual speed control for both rows
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface

Tablet Dissolution Testing Instruments

A dissolution test is a means of identifying and proving the availability of active pharmaceutical ingredient (API) in their delivered form. A dissolution test reflects the availability of active substance and allows the prediction of the time for complete release of the material from the dosage form. All Pharma Test tablet dissolution testing instruments are fully USP, EP and JP compliant. They use our MonoShaft™ tool system and include a full set of vessel and USP Apparatus 2 paddles. A full range of dissolution accessories is also available.



PT-Node
Instrument Network Adapter

- > Prints test reports via a web browser on any printer
- > Exports results to external systems in your company network
- > Connects up to two instruments simultaneously



PTWS 1420
14+2 Station Tablet Dissolution Bath

- > 14 stirred positions, 2 additional standard size vessels: ideal for Biowaiver tests
- > Dual drive configuration with two stirrer motors
- > Independent stirrer speed control



PT-DT70
6+1 Station Tablet Dissolution Bath

- > 7 stirred positions
- > Low head design with pneumatic flip-back lift
- > Tablet drop directly through chutes in instrument head



PT-DDS4
Media Preparation System

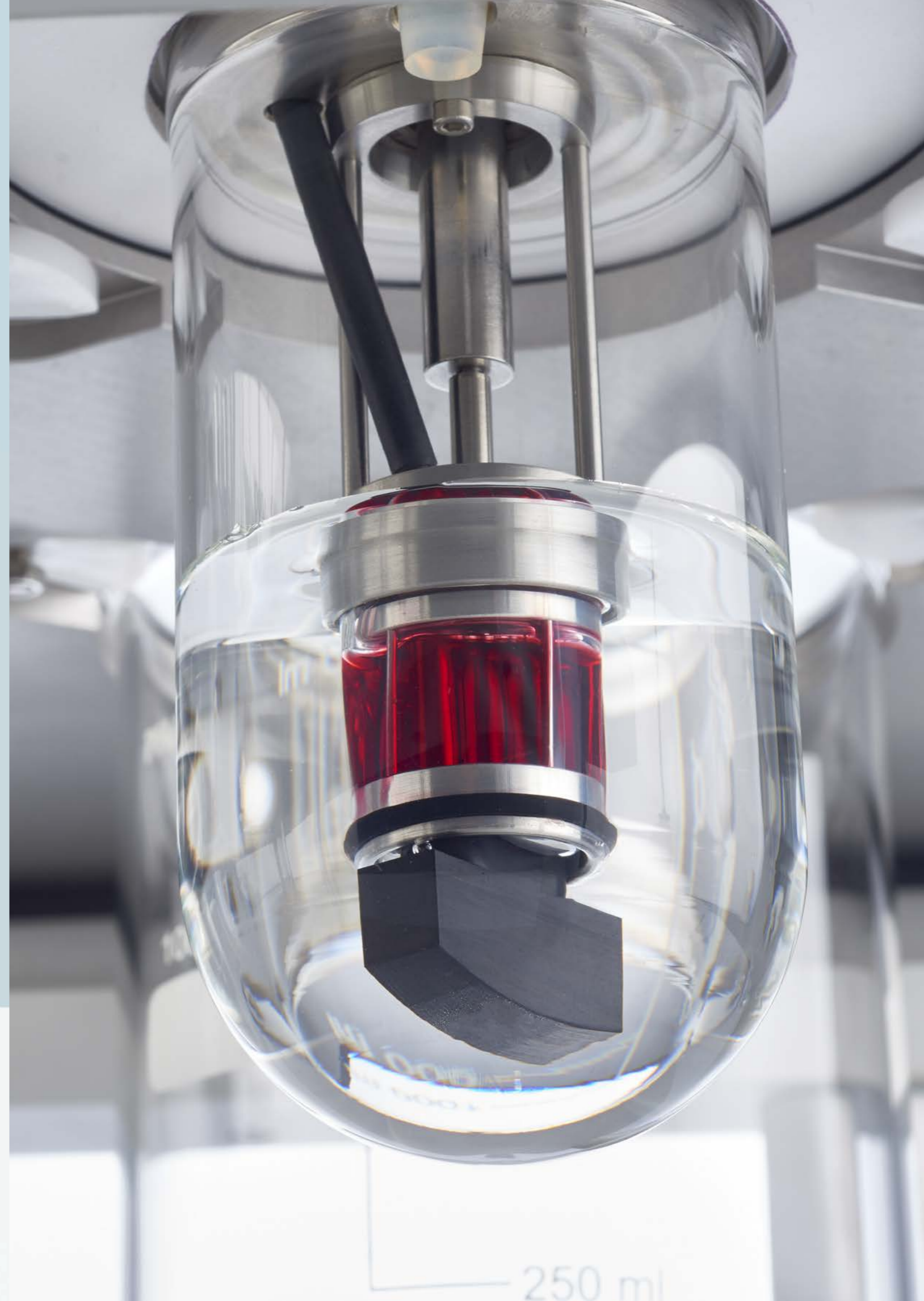
- > Prepares up to 25 liters of pre-heated and deaerated medium
- > Media degassing is one of the most influential factors on USP suitability tests
- > Deaeration by vacuum is the most efficient medium preparation process

The PT-DR Dispersion Releaser

The PT-DR Dispersion Releaser is a dialysis-based apparatus for the release testing of nanomedicines, microformulations and semi-solid dosage forms within a standard dissolution tester. It is composed of a sample holder cell serving as the donor compartment for dispersed dosage forms. A dialysis membrane is disposed around this housing. This donor chamber is agitated by a paddle stirrer that is connected to the USP Apparatus 2.

PT-DR DISPERSION RELEASER APPARATUS FOR NANO- AND MICROFORMULATIONS

- Tests the release of nanomedicines and microformulations
- Can be used in standard Pharma Test dissolution tester
- Offers reproducible test results for these new delivery systems





DFC | Offline Automated Dissolution Testing Systems

The DFC offline automated dissolution testing systems include a dissolution bath, a pump and a fraction collector which will collect the sampled dissolution media.

DFC | OFFLINE AUTOMATED DISSOLUTION TESTING SYSTEMS

- > Automates sampling, the most labour intensive stage of a dissolution test
- > Automated sampling reduces human (non-systematic) errors
- > Offers unattended operation after start of dissolution run

The complete system is supplied by Pharma Test. We offer full system responsibility.

Automated Dissolution Testing Systems

An offline automated dissolution system includes a dissolution bath, a pump and a fraction collector. They automate sampling which is the most labor intense stage of a dissolution test, especially for sustained release products. Online systems automate sampling, measuring, and result calculation. Unlike the offline systems where samples are removed from the dissolution vessels and stored either for transfer to a measurement system or for further preparation (e.g. dilution), the samples here are circulated in a closed loop. The TIDAS® L UV/VIS spectrophotometer with multi cell changer by J&M and the WinDiss ARGUS PC control software is included as part of this system set-up.



DSR-M | Dissolution Sampling Robot

The flexible, modular design of the DSR-M allows sampling, auto media refill, dilution and transfer into HPLC vials for 6 to 12 station dissolution baths.

- > Features integrated valve-free piston pumps for high precision
- > Modular design to allow auto media refill, dilution and transfer into HPLC vials for 6 to 12 station dissolution baths
- > Up to 20 sampling cycles (10 cycles with dilution)

100% USP / JP / EP compliant



DFC 820SP

Offline automated dissolution system with 8 vessel dissolution tester PTWS 820 – system also available with 6, 12 (+2), 14 (+2) vessel dissolution tester

ADS-L Fully Automated Online Tablet Dissolution Systems

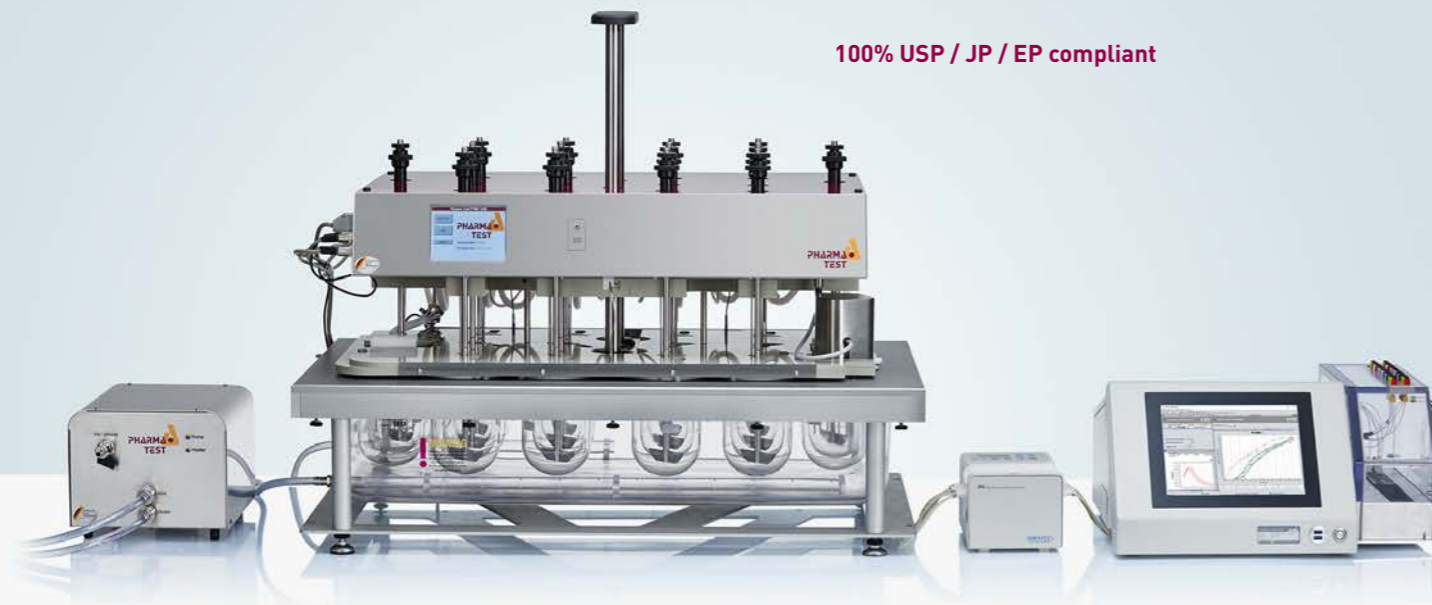
The ADS-L online dissolution systems combine the tablet dissolution apparatus with a powerful and fast-diode array spectrometer for rapid test results. The system is controlled by a specialized PC software controlling all instruments of the system and storing all test results. The system is fully integrated, the software comes pre-installed on the IPC built into the spectrometer. The systems increase productivity by allowing for unattended operation, increasing the reproducibility of results and by making data available quickly.

The complete system is supplied by Pharma Test. We offer full system responsibility.

THE ADS-L ONLINE TABLET DISSOLUTION SYSTEMS CONSIST OF:

- > Pharma Test PTWS dissolution tester
- > TIDAS® L DAD UV/VIS spectrophotometer
- > 21 CFR Part 11 compliant WinDiss ARGUS Dissolution Software
- > A multi-channel pump

100% USP / JP / EP compliant



ADS-L 1420

Fully Automated Online Tablet Dissolution Testing System with 14+2 vessel dissolution tester
PTWS 1420 – system also available with 6, 8, or 12 (+2) vessel dissolution tester



The PTWS Series Offers Flexible Choice of Tablet Dissolution Tester!

- > 6, 8, 12 or 14 vessel arrangement
- > Automated lift drive with programmable positions
- > Options for automated sampling manifold, tablet drop magazine and individual vessel temperature sensors
- > Dual stirring speed option
- > Color touch screen user interface
- > Easy to clean and to set up



WinDiss ARGUS Dissolution Software Scientific Dissolution Data Management Software

- > For instrument control, data acquisition, data management, processing and reporting
- > Ensures regulatory compliance to 21CFR Part 11
- > Connects multiple dissolution systems to one central database
- > Detailed audit trail for electronic records
- > Exchanges data with LIMS or enterprise document management systems (EDMS)



TIDAS® L Fiber Optic Diode-Array Spectrometer

- > Certified optical fibers and optimized measuring cells ensure reliable measurement results
- > Multi-cell changer supports up to 14 cuvettes
- > Option to connect two fiber optic probes
- > Diode-array technology enables multi-component analysis
- > Integrated PC running the WinDiss ARGUS dissolution Software



EXPANDED APPLICATIONS:

- > PT-DR Dispersion Releaser – A dialysis-based apparatus to test nano- and microformulations
- > PTWS 820-MA Media Addition System – Perform automated media change by buffer addition (“half change”)
- > IDS-L Fiber Optic Dissolution System – In-Situ measurements directly in the testing vessels with optimized probe design (upcoming)



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Over 100 distributors and agents serve your interests worldwide, with fully qualified and trained staff to service and maintain your investment.