Dissolution Guide

Our broad range of dissolution testers

ERWEKA

Our Dissolution Program USP 1-7

ERWEKA offers dissolution testers for every single harmonized USP/EP/JP dissolution method – starting from USP 1 up to USP 7.

USP methods 1, 2, 5 and 6

We offer a broad range of dissolution testers - from manual testing with the DT 126/128 Light up to the high-volume tester DT 1610 Series.

Dissolution Systems

Our semi-automated dissolution systems are available as Offline, Online and On-/Offline Systems for UV-Vis and HPLC analytic.

Fully automated Dissolution System RoboDis II

The productivity booster for fully automated, 24/7 non-stop dissolution testing with up to 40 batches.

Disso.NET 2018 Software

Our advanced dissolution software solution Disso.NET 2018 controls all our dissolution systems.

Pumps

Every dissolution system needs a pump – we offer several options suited to different needs.

Media Preparation

We offer the perfect companions to your dissolution tester for fast media preparation and filling of vessels.

USP methods 3/7

The RRT 10 BioDis for automatic dissolution testing of different extended and sustained release dosage forms.

USP 4

USP method 4 is supported by our Flow-Through Cell DFZ II, available as stand-alone or as a system.

Chewing Gum Tester DRT

Our dissolution tester for testing of in vitro release of substances into surrounding liquid medium.

Dissolution Options

ERWEKA offers a broad range of options for all of its dissolution testers and systems.

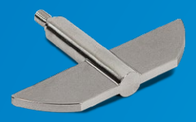
USP methods overview

USP method 1 – Basket

Application
- Immediate / Extended and delayed release forms
- Tablets
- Capsules
- Beads
- Floating dosage forms
- Agitation method: Rotating Stirrer

Advantages
- Lots of experience (oldest method, more than 200 monographs in USP)
- No sinker necessary
- pH change possible

USP method 2 – Paddle



Application
- Tablets
- Capsules
- Beads
- Immediate / extended and delayed release forms
- Agitation method: Rotating Stirrer

Advantages
- Lots of experience
- Easy to use and robust
- pH change possible

USP method 3 – Reciprocating Cylinder

Application
- Low solubility drugs
- Tablets / Capsules
- Implants
- Granulates & Powders
- Suppositories
- Stents
- Cremes / Dialysis
- Agitation method: Fluid Movement

Advantages
- Easy pH change
- Hydrodynamic can be influenced by varying dip and rate

USP method 4 – Flow-Through Cell

Application
- Low solubility drugs
- Tablets / Capsules
- Implants
- Granulates & Powders
- Suppositories
- Stents
- Cremes / Dialysis
- Agitation method: Fluid Movement

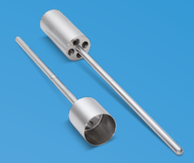
Advantages
- Laminar flow possible
- Easy media change
- pH profile possible
- 2 system setups:
  - open system (permanent fresh media)
  - closed system (long-term tests over many days)

USP method 5 – Paddle over Disk

Application
- Transdermal patches
- Floating dosage forms
- Unguents
- Emulsions
- Agitation method: Rotating Stirrer

Advantages
- Standard equipment (USP 2 - paddle)

USP methode 6 – Rotating Cylinder



Application
- Transdermal patches
- Agitation method: Rotating Stirrer

Advantages
- Standard equipment can be used
- Variable volumes
- Big patches useable

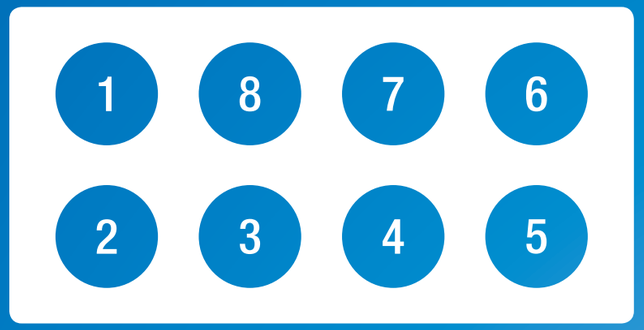
USP method 7 – Reciprocating Holder

Application
- Transdermal patches
- Extended release dosage forms
- pH profiles
- Agitation method: Reciprocation

Advantages
- Small volumes possible
- Holder can be varied
- Easy pH change

Different holder types:
- Acrylic Rod: Extended release tablets
- Angled Disk: Transdermal system
- Fluoropolymer cylinder: Transdermal system
- Spring holder: Extended release tablets
- Reciprocating holder: Transdermal system

Test station positions



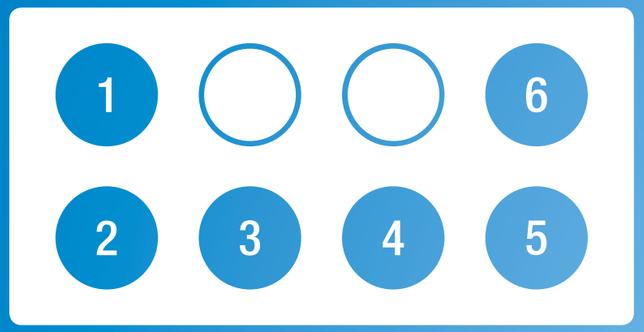
Schematic view of ERWEKA test stations

ERWEKA's dissolution tester can be equipped with 6 to 8 (12 to 14) test stations. Even though all of the testers are offered with a different number of stations, they differ from product line to product line.

The dissolution tester DT 126 light comes with a fixed number of 6 test stations, its bigger sibling, the DT 128 light comes with 8.

The dissolution testers of the DT 720 and 820 series always come with inlets for 8 vessels, which are covered with blinds, if a DT with 6 or 7 test stations is ordered.

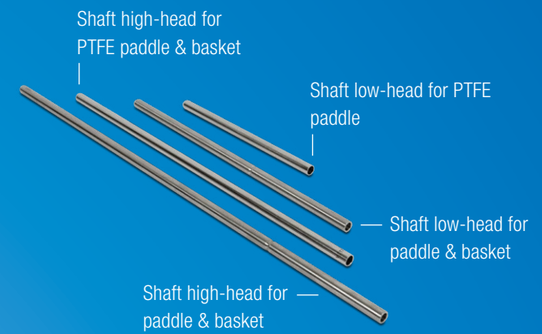
Dissolution testers with less then 8 stations can be upgraded by ERWEKA service.



Vessel configuration example
DT 726 or DT 826

Low-head, high-head und cleaning position

ERWEKA's dissolution testers offer two different operating modes which differ by the position of the head, and a third position for cleaning.



Low-head operating mode (LH)

The low-head mode is the standard mode and usually comes in conjunction with a system configuration with automated sampling station (ASS-8). Benefits are the closed vessels and therefore low evaporation.

High-head operating mode (HH)

The high-head mode is best used for manual testing and manual sampling. To reduce evaporation, vessels are covered with a cover. Manual sampling is easier in high-head mode. Longer shafts have to be selected on purchasing for high-head mode.

Cleaning position

The cleaning position is the upmost position of the dissolution testers' head. It makes cleaning effortless and easy.

Manual dissolution testing, simple and compact

DT light Series

The ERWEKA DT light Series delivers the proven ERWEKA quality in a comprehensive package for a budget for simple dissolution testing with USP method 1, 2, 5 and 6. The DTs are equipped with 6, 8 or 12 test stations and a fixed drive head (high-head), allowing easy access to each 1000 ml vessel.

The shafts can be replaced easily and the unique water bath of moulded PET is equipped with the time-proven ERWEKA water outlet for easy cleaning. The external flow through heater reduces the influence of external vibrations and ensures a constant temperature. Every accessory that comes into contact with the dissolution sample is installed in Germany. Therefore our DT light Series has the ERWEKA made in Germany quality.

All these features make sure that the ERWEKA DT light Series is the perfect entry-level device for the world of dissolution testing.

Highlights

- 100 % USP/EP/JP compliant
- Compact design saving lab space
- High-head mode for easy access to the vessels
- Universal shafts with attachments for Method 1, 2 (paddles included), 5 and 6 available
- Easy cleaning of the water bath and the set-up area
- External flow through heater reduces influence of external vibrations and ensures constant temperature
- Simple control using symbol keypad with LED display for temperature, RPM and runtime
- Manual sampling using height adjustable holder for USP sampling points

100% **100% USP/EP/JP compliant**

Manual testing

LED display and symbol keypad for easy control

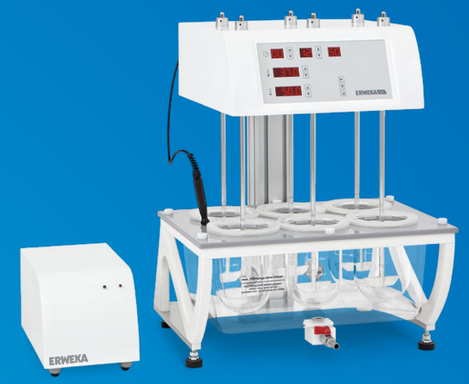
Low-evaporation vessel covers are included

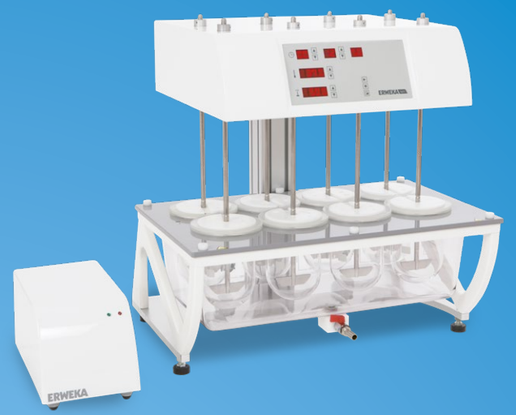
Art. No.	Dissolution Tester DT 126 / 128 Light
19996	DT 126 Light Dissolution Tester with 6 test stations
20412	DT 128 Light Dissolution Tester with 8 test stations
25025	DT 121 Light Dissolution Tester with 12 test stations

DT 126 light

Specifications

- High-head with 6 test stations
- Dimensions (width / depth / height): 510 mm / 450 mm / 660 mm
- Weight: 30 kg





DT 128 light

Specifications

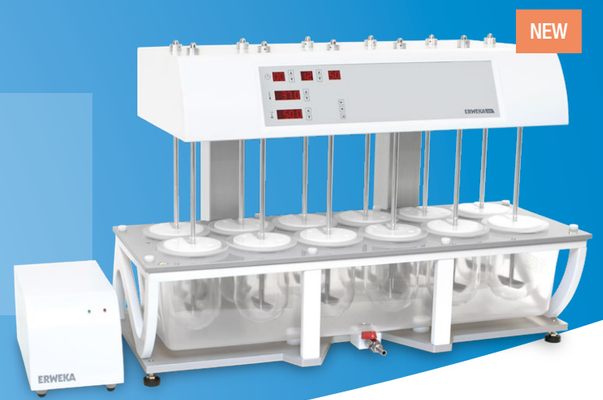
- High-head with 8 test stations
- Dimensions (width / depth / height): 642 mm / 482 mm / 680 mm
- Weight: 38 kg

DT 1212 light

NEW

Specifications

- High-head with 12 test stations
- Dimensions (width / depth / height): 932 mm / 444 mm / 656 mm
- Weight: 60 kg



Dissolution Tester
DT 720 Series

The ERWEKA DT 720 series has been designed in accordance with USP/EP/JP requirements for testing tablets and other dosage forms. It combines state-of-the-art with excellent and user-friendly design. The high-head and low-head operating modes offer highest flexibility. The tester can be used as a stand-alone device as well as a dissolution system equipped with an automated sampling station, operated via the ERWEKA Disso.NET 2018 software.

The manual lifter column with gas-strut support allows effortless and rapid lifting and lowering of the drive head in just a few seconds. Tablets, pellets and other dosage forms are inserted in the drive head via the manual tablet drop magazine. Samples are withdrawn for analysis through special, membrane sealed sampling openings inside the drive head. The evaporation is less than one percent during 24 hours (37° C, 50 rpm, 1000 ml).

The extensive use of carbon fibre eliminates metal usage and therefore reduces the risk of corrosion to a minimum. Test run parameters can be documented via the USB-A printer interface (optional).

Art. No.	Dissolution Tester DT 720 Series
18316	DT 726/1000 LH/HH Dissolution Tester with 6 test stations
18317	DT 727/1000 LH/HH Dissolution Tester with 7 test stations
18318	DT 728/1000 LH/HH Dissolution Tester with 8 test stations

100%
100% USP/EP/JP compliant

USP methods 1, 2, 5 and 6

Online System with UV-Vis or HPLC

High-head and low-head mode

Dissolution Tester
DT 820 Series

ERWEKA DT 820 series offers advanced intelligence and features for stand-alone operation or for control of a complete dissolution offline sampling system. It allows storage of up to 60 product test methods.

The DT 820 series can be equipped with 6, 7 or 8 test stations and be used in high-head or low-head mode. It offers an OQ traffic light to show USP/EP/JP compliance, a low evaporation cover as well as an external temperature sensor for checking the water bath.

The water bath is designed for easy access and cleaning and is made of non-leaking PET. Centering rings ensure correct position of vessels and stability for withdrawal of samples. The standard configuration comprises a temperature sensor.

Art. No.	Dissolution Tester DT 820 Series
18324	DT 826/1000 LH/HH Dissolution Tester with 6 test stations
18325	DT 827/1000 LH/HH Dissolution Tester with 7 test stations
18326	DT 828/1000 LH/HH Dissolution Tester with 8 test stations

Highlights

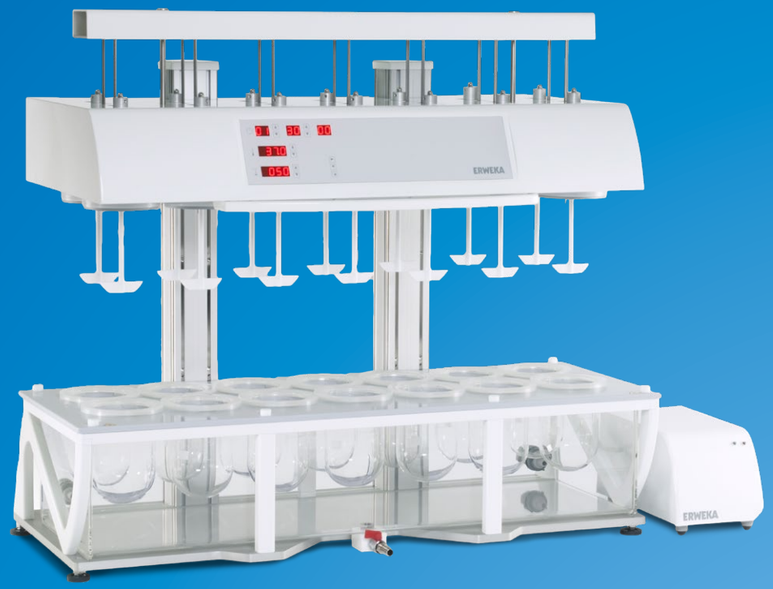
100%
100% USP/EP/JP compliant

Direct control of offline system possible

USP methods 1, 2, 5 and 6

High-head and low-head mode

Dissolution Tester
DT 1410 Series



The DT 1410 series is based on the proven DT 720 series and can be configured for 12, 13 or 14 test stations arranged in two rows.

The DT 1410 provides the possibility of performing one test with 12, 13 or 14 tablets or two tests with 6 resp. 7 tablets. The substantial advantage is that two USP tests can be carried out with one test bath at equal test conditions. Besides, the unit is offered with various vessel sizes (400 ml, 1000 ml) and is available with high-head (maximum access) and low-head (low-evaporation version; for automation) mode.

The DT 1410 series is made for users with generic products or high capacity in mind. Due to the configuration, the device allows to run two different batches of the same product or two different products with the same dissolution monograph at the same time.

Highlights

- 100% USP/EP/JP compliant
- USP methods 1, 2, 5 and 6
- Test 12/13/14 tablets or 2 batches with 6 or 7
- High volume Online System with UV-Vis or HPLC
- Manual and semi-automated

Art. No.	Dissolution Tester DT 1410 Series
18319	DT 1412 (LH/HH) 1000 ml Dissolution Tester with 12 test stations
18320	DT 1413 (LH/HH) 1000 ml Dissolution Tester with 13 test stations
18321	DT 1414 (LH/HH) 1000 ml Dissolution Tester with 14 test stations

Dissolution Tester
DT 1610 Series

The ERWEKA DT 1610 series offers advanced intelligence and features for stand-alone operation or for control of a complete dissolution offline sampling system. It allows storage of up to 60 product test methods.

The DT 1610 series can be equipped with 12, 13 or 14 test stations arranged in 2 rows, which can be operated in high-head and low-head mode.

It offers an OQ traffic light to show USP/EP compliance as well as an external temperature sensor for checking the water bath temperature. The water bath is designed for easy access and cleaning.

Art. No.	Dissolution Tester DT 1610 Series
18328	DT 1612 (LH/HH) 1000 ml Dissolution Tester with 12 test stations
18329	DT 1613 (LH/HH) 1000 ml Dissolution Tester with 13 test stations
18330	DT 1614 (LH/HH) 1000 ml Dissolution Tester with 14 test stations

Highlights

- 100% USP/EP/JP compliant
- USP methods 1, 2, 5 and 6
- Test 12/13/14 tablets or 2 batches with 6 or 7
- Direct control of high volume offline system
- Easy cleaning

DT 1614 with ASS-14 automated sampling station

Levels of Automation

ERWEKA offers several products for different types of automation levels. The semi-automated Dissolution Offline System for automation of three steps of the dissolution process or a semi-automated Dissolution Online System are perfect entry-level systems into the world of 100% USP/EP/JP, automated testing. Our Dissolution On-/Offline System with UV-Vis or HPLC analysis automates five steps of the dissolution process. In addition with a MediPrep 820 the media preparation can also be automated.

For fully automated 24/7 testing and 100% reproducibility of all tests, we offer the RoboDis II - a real productivity booster with fully automated testing of up to 40 batches including setup, media preparation and cleaning automation.

Dissolution Steps	1. Setup	2. Media preparation and filling	3. Tablet drop, stirring of baskets or paddles	4. Automated Sampling & Filtration	5. 2nd Filtration	6. Sample collection into glass vials / HPLC vials	7. Analysis of samples (UV-Vis or HPLC)	8. Cleaning process
Levels of Automation		MediPrep 820	**Manual** Testing					
		MediPrep 820	**Semi automated** Dissolution Offline System		optional	Sample collector		
		MediPrep 820	**Semi automated** Dissolution Online System with UV-Vis		optional		UV-Vis	
		MediPrep 820	**Semi automated** Dissolution On-/Offline System with UV-Vis		optional	UV-Vis ⇄	Sample collector	
		MediPrep 820	**Semi automated** Dissolution On-/Offline System with HPLC		optional	Sample collector	HPLC	
	Fully automated Dissolution System RoboDis II							

Semi-automated dissolution testing

Dissolution Offline System

The ERWEKA Dissolution Offline System is the ideal semi-automatic solution for dissolution testing with automated sampling and subsequent sample storage for later analysis. The system is controlled by a DT 820 series dissolution tester with advanced intelligence.

The DT 820 series equipped with i-Version comes with integrated intelligence for controlling the offline sampling system, which consists of an auto sampling station ASS-8 connected to the DT, a pump (peristaltic or piston) and the sample collector of the FRL series for storing the samples in glass tubes or sealed HPLC vials.

This configuration does not require an additional PC or any software and therefore saves space, money and last but not least software validation work.

Highlights

- 100% USP/EP/JP compliant
- USP methods 1, 2, 5 and 6
- Direct control of the complete system by DT 820
- Sample collector FRL 6/7/854

Art. No.	Dissolution Offline System
25371	Standard Offline Dissolution System with PVP 654 **and new FRL** for DT 826
25373	Standard Offline Dissolution System with PVP 764 **and new FRL** for DT 827
25370	Standard Offline Dissolution System with PVP 864 **and new FRL** for DT 828
25376	Standard Offline Dissolution System with PVP 1220 **and new FRL** for DT 1612
25378	Standard Offline Dissolution System with PVP 1420 **and new FRL** for DT 1614

Big volume testing with DT 161x and FRL 854/2

DT 820 Series

ERWEKA dissolution testers of the DT 820 series are 100 % compliant to USP methods 1, 2, 5 and 6. By default the Offline System is equipped with a DT 820 in low-head mode and can be also optionally operated in high-head mode.

PVP 820 Series

The practically maintenance-free piston pump transports the test medium with high precision and pressure via eight channels to the compact sample collector of the FRL 854 series. IPC pump optionally available.

FRL 854 Series

The sample collector FRL 6/7/854 offers a space-saving footprint and a precise dosing for up to 26 rows with 8 channels.

ERWEKA Systems

Dissolution Online System UV-Vis

The ERWEKA Dissolution Online System is the perfect semi-automatic solution for dissolution testing with automated UV-Vis online analysis.

The DT 720 series with the integrated, automated ASS-8 sampling station transports freshly sampled media directly to the UV-Vis analysis device (several brands available). There, the samples can be measured and the results can then be stored within our advanced Disso.NET dissolution software, which controls the online system.

Our Disso.NET software can control different UV-Vis spectrophotometers like Shimadzu UV-1800, Analytik Jena Specord 210/8 and 210/16 or the Agilent Cary 8454. These photometers are fully integrated in our systems and the test results are displayed in our software.

Art. No.	Dissolution Online System UV-Vis
25306	UV-Vis Online System with Shimadzu 1900, IPC 8 for DT 72x + Disso.NET
18465	UV-Vis Online System AGILENT with IPC 8 for DT 72x + Disso.NET
18472	UV-Vis Online System with Analytik Jena Specord 210/16 for DT 141x LH
24242	UV-Vis Online System with Analytik Jena Specord 210/16 for DT 141x HH

Big volume testing with DT 141x and Analytik Jena Specord 210/16

Highlights

- 100% USP/EP/JP compliant
- Controlled by Disso.NET
- USP methods 1, 2, 5 and 6
- Integrated UV-Vis analysis

ERWEKA Systems

Dissolution On-/Offline System UV-Vis

The ERWEKA Dissolution UV-Vis On-/Offline System is the ideal system configuration for spectrophotometers. With the connected PC, the On-/Offline System can be conveniently controlled via our advanced Disso.NET software. Moreover, the software offers full control over all components and storage of all test results.

After analysis has been completed, the samples are comfortably stored by our very own sample collector FRL 654/754/854 for later HPLC analysis or as reference standard.

Art. No.	Dissolution On-/Offline System UV-Vis
25372	UV-Vis On-/Offline Dissolution System Agilent 8454 6 channel for DT 726
25379	UV-Vis On-/Offline Dissolution System Analytik Jena Specord 210/16 for DT 1410

Big volume testing with DT 141x and Analytik Jena Specord 210/16

Highlights

- 100% USP/EP/JP compliant
- Controlled by Disso.NET
- USP methods 1, 2, 5 and 6
- Advanced UV-Vis analysis
- Sample collector and storage

ERWEKA Systems

Dissolution On-/Offline System HPLC

The ERWEKA HPLC On-/Offline Dissolution System, 100 % compliant with all harmonized pharmacopoeias, is the perfect semi-automated solution for HPLC online analytic and features a high degree of automation and flexibility. It combines ERWEKA's high quality dissolution tester (DT 720 series) with CTC sampling and online HPLC chromatography. The system is controlled by the fully validated ERWEKA Disso.NET software and offers a high efficient sample management.

In addition, the HPLC On-/Offline Dissolution System uses an innovative flow-through system of sealed PEEK-vials. For pumping the test media from the dissolution tester to the CTC sampler two solutions can be implemented: a peristaltic pump or an ERWEKA piston pump. In case of filtration from 1 µm porosity, test samples can be withdrawn from the vessels through poroplast filters using a peristaltic pump. If a filtration from 0.45 µm porosity is required, the membrane filter changer AFC 825 or a double filtration station in combination with a high-precision ERWEKA piston pump PVP can be used instead. Connecting the system to the Disso.NET software provides not only easy und precise system operation, but also significantly facilitates the test process through the automatic recording of sampling times, temperature and rotation speed in each vessel (= documentation of all system actions).

Advanced intelligence with excellent, user-friendly design as well as dissolution testing with highest efficiency are hence offered by the ERWEKA HPLC On-/Offline Dissolution System.

Highlights

- 100% USP/EP/JP compliant
- Controlled by Disso.NET
- USP methods 1, 2, 5 and 6
- CTC sample collector and storage for HPLC
- Online HPLC chromatography

Art. No.	Dissolution On-/Offline System HPLC
24425	HPLC On-/Offline Dissolution System with PVP 620 piston pump with CTC II

Overview

Pumps for Dissolution Systems

	Peristaltic pumps	ERWEKA piston pumps	
Pump	**IPC 8 / 16**	**PVP 620 / 720 / 820**	**PVP 1220 / 1420**
Channels	8 or 16	6, 7 or 8	12 or 14
Valves	-	-	-
Accuracy	+/– 0.5 ml	+/– 0.5 ml	+/– 0.5 ml
Dilution	-	-	-
Media replacement	Standard	Standard	Standard
Double filtration (optional)	Only when first filtration with poroplast filters. No media replacement possible when double filtration.	No media replacement possible when double filtration	No media replacement possible when double filtration
Required type of sample collector	FRL 624 / 724 / 824	FRL 624 / 724 / 824	FRL 624 / 724 / 824
System compatibility	DT Offline / DT Online DT On-/Offline	DT Offline / DT Online DT On-/Offline	DT Offline / DT Online DT On-/Offline
Advantage	**Basic pump** possible with DT 14x/16x, needs regular replacement of tubing	Filtration down to 0.22 µm for flat membrane filters, **Best choice for fully automated dissolution systems**	Filtration down to 0.22 µm for flat membrane filters, low maintenance even at high throughput, **Best choice for dissolution systems**

Fully automated: **RoboDis II**

The flexible specialist
for R&D

Many types of dosage forms

The RoboDis II can handle several types of dosage forms. No matter what you use - tablets, granulates or powders - RoboDis II is the ideal, flexible and fully automated dissolution system for all your usage needs. It even handles Japanese Sinkers with a size of up to 34 mm with ease!

Versatile filtration

Filtration with the RoboDis II has no boundaries - inline poroplast filters, membrane filters down to 22 µm and even double filtration are supported.

pH half change and pH full change (USP methods A & B)

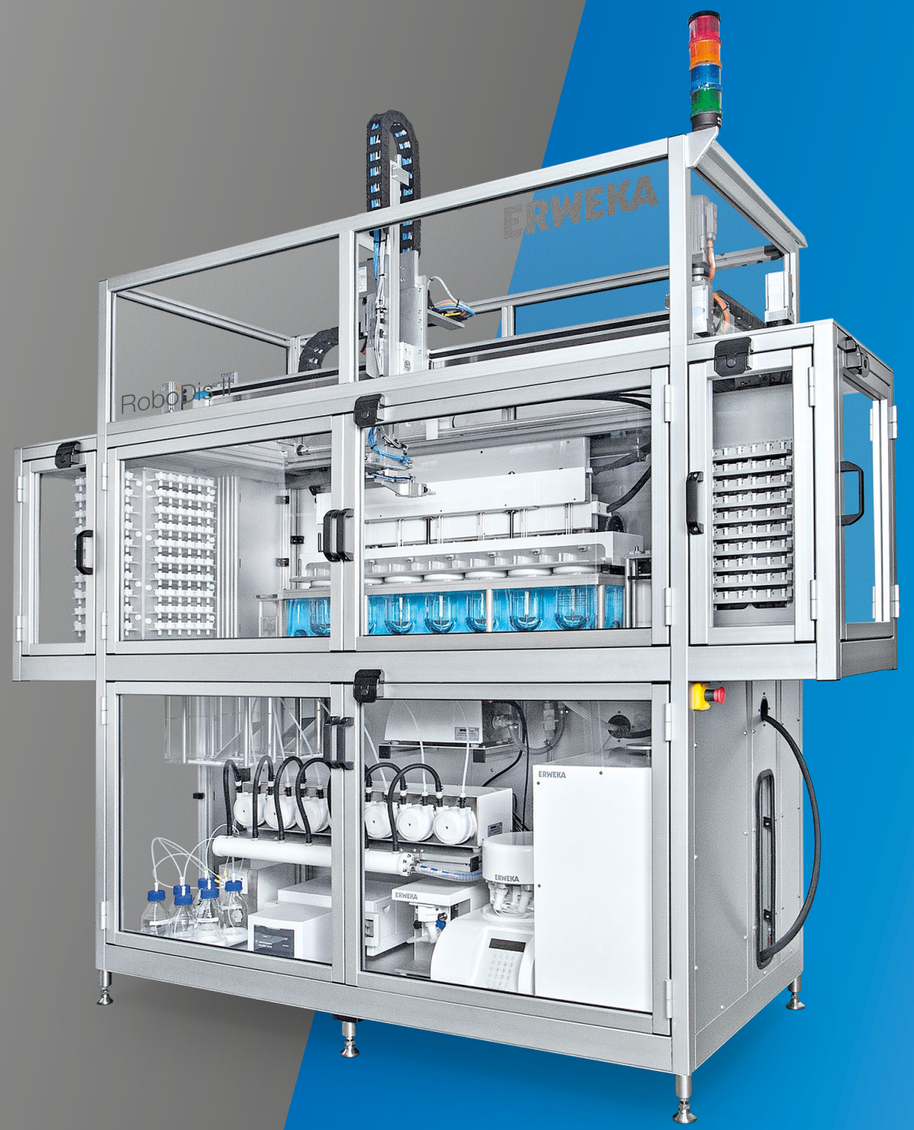
The fully automated ph change (both half and full possible) is supported by the RoboDis II. Just configure your method using the powerful Disso.NET software and run your test – the RoboDis II will automatically take care of the rest.

Broad range of analytics available

RoboDis II supports a broad range of analytical devices. UV-Vis spectrophotography, chromatography using HPLC or even a combination of both – the RoboDis II handles and controls all of them.

6 reference standards

Mandatory in R&D: Flexible reference standards for quick testing of several formulations. Thanks to an integrated standard changer system, the RoboDis II handles them with ease.



The Produtivity Booster
for Quality Control

Planned productivity with 10, 20 or 40 batches

Productivity can be easily scheduled with the RoboDis II. For example, the system can autonomously handle up to 40 batches during the weekend and then present all the results to the laboratory employee on the following workday for evaluation. With video recording and time-lapse function, a visual inspection of the completed test process is possible afterwards.

High volume – 40 batches

Testing, testing, testing - that is what the RoboDis II does best. The 40 batch option allows volumes that are usually only matched by a multitude of semi-automated systems, demanding a lot more laboratory space and staff then ERWEKA‘s RoboDis II.

Parallel approach

The RoboDis II is following a parallel test approach: Tablet drops, sampling and emptying of the vessels are all done in parallel.

Robotic precision & integrated error control

Every dissolution step is fully automated and is completely tracked by the system itself. This means, that all tasks performed by the RoboDis II during a test are identically repeated in the next test, thus removing the human error factor completely. The system offers highest reliability and allows the laboratory employees to concentrate on the analysis of the provided data.

Space-saving footprint

To match the RoboDis IIs productivity with semi-automated systems, at least three units and operators are needed to perform 10 batches per day. Do the math!

The Productivity Booster
RoboDis II

The fully automated dissolution system is already used in quality control and R&D by several multinational companies and has brought a huge increase in productivity. It fully automatically handles 10, 20 or 40 batches of dissolution testing USP method 1 basket or method 2 paddle in a parallel approach, therefore enables very short sampling points of 5 minutes, depending on product and method. As all ERWEKA products, the RoboDis II works 100% conform to all harmonized pharmacopoeias in every aspect.

All steps of the dissolution process - media preparation, filling, setup of dissolution tester, testing, automated sampling, online analytics (UV-Vis or HPLC) and the whole cleaning process are performed without the need of user intervention. The whole system is controlled by the ERWEKA Disso.NET software, from the robot arm to media preparation and analytic devices.

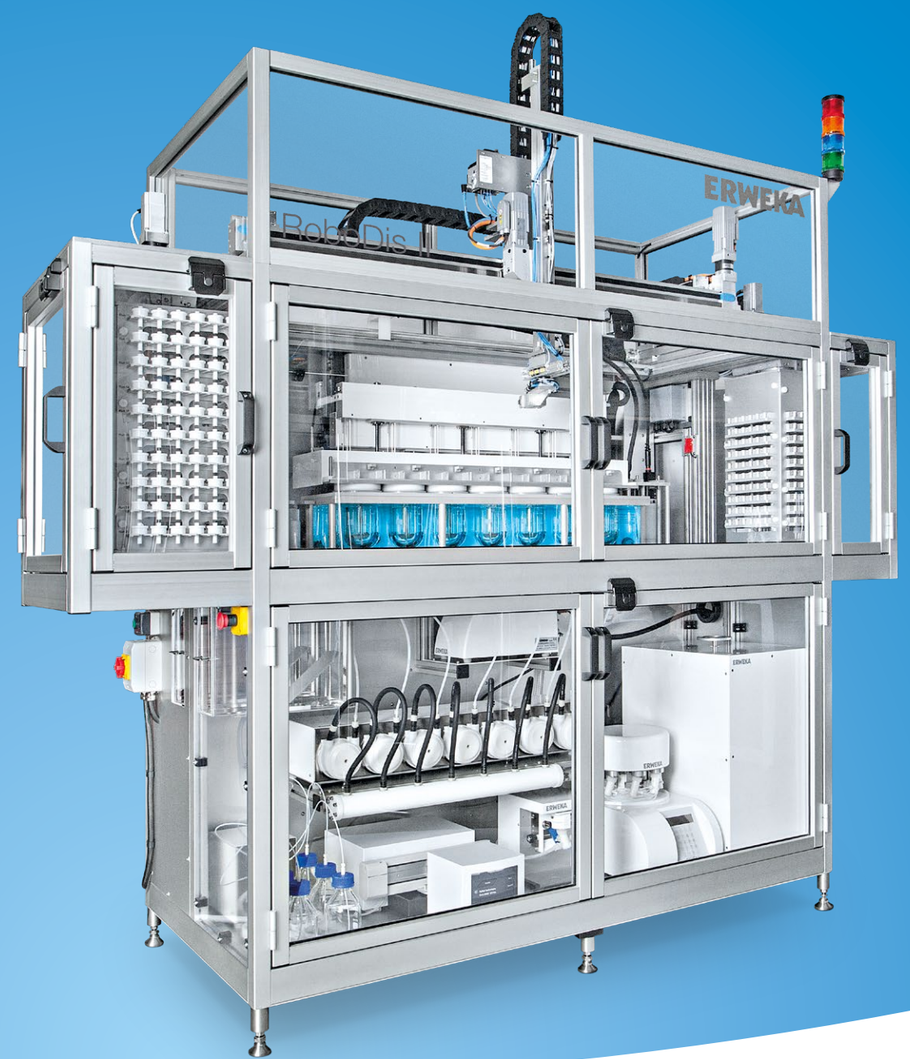
Supported by several integrated System Suitability Tests and light sensor checks, this system runs absolutely precise and reliable, minimizing human error. It is human error proofed so to say.

Highlights

- 100% USP/EP/JP compliant
- USP methods 1 and 2
- 10, 20 or 40 batches in one test run
- Online UV-Vis or HPLC analysis
- pH half change or full change
- Vacuum degassing
- Controlled by Disso.NET
- System Suitability Tests (SST)
- Video monitoring

Simultaneous tablet insertion allows high accuracy of processes.

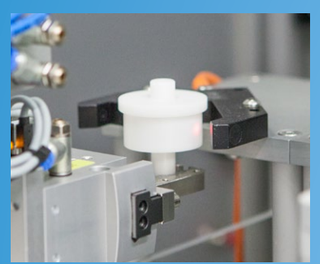
pH change in accordance with USP method A (Half Change) is possible.



Different tools for different applications are available.

Automatic cleaning and result checks of the cleaning process (SST).

10, 20 or 40 Batch sample magazine for continuous testing 24/7.



Continuous verification of processes with controlling sensors.

24/7 testing with LED light bar and six ethernet cameras.

The new
Disso.NET 2018 dissolution software

The ERWEKA Disso.NET 2018 is the perfect 21 CFR Part 11 compliant companion to all our Dissolution Systems, ranging from Dissolution Offline over Online to On-/Offline Systems up to the fully automated RoboDis II system and the USP 4 Flow-through-cell Systems.*

The software helps you with standard dissolution jobs, easily handles qualification tasks and provides control over each single function and connected devices (e.g. dissolution tester with UV-Vis spectrophotometer). After finishing those tests, Disso.NET creates extensive reports with corporate logos for PDF-file export or exports your results in XLS or XML.

Our extensive Audit Trail according to latest 21 CFR part 11 thoroughly documents all changes done to the system (what, who, when and why) and can be easily searched and filtered by the Audit Trail Viewer.

Supports Dissolution Systems, RoboDis II and USP 4

The Disso.NET 2018 supports all ERWEKA Dissolution Systems, the fully automated RoboDis II and even our USP 4 Flow-Through-Cell systems.*

Full Audit Trail according to 21 CFR Part 11 NEW!

The new Audit Trail feature is implemented throughout the whole software, tracking each and every change (What, Who, When and Why). If data is changed by the user (e.g. when editing methods), the software requires a reason entered by the user. In combination with our easily search- and filterable audit trail viewer, changes to the system and its data can be easily traced back to its origin and originator. With Disso.NET 2018, it is not possible to delete data from the system

100% **Full Audit Trail according to 21 CFR Part 11**

Support for USP methods 1, 2, 4, 5 and 6

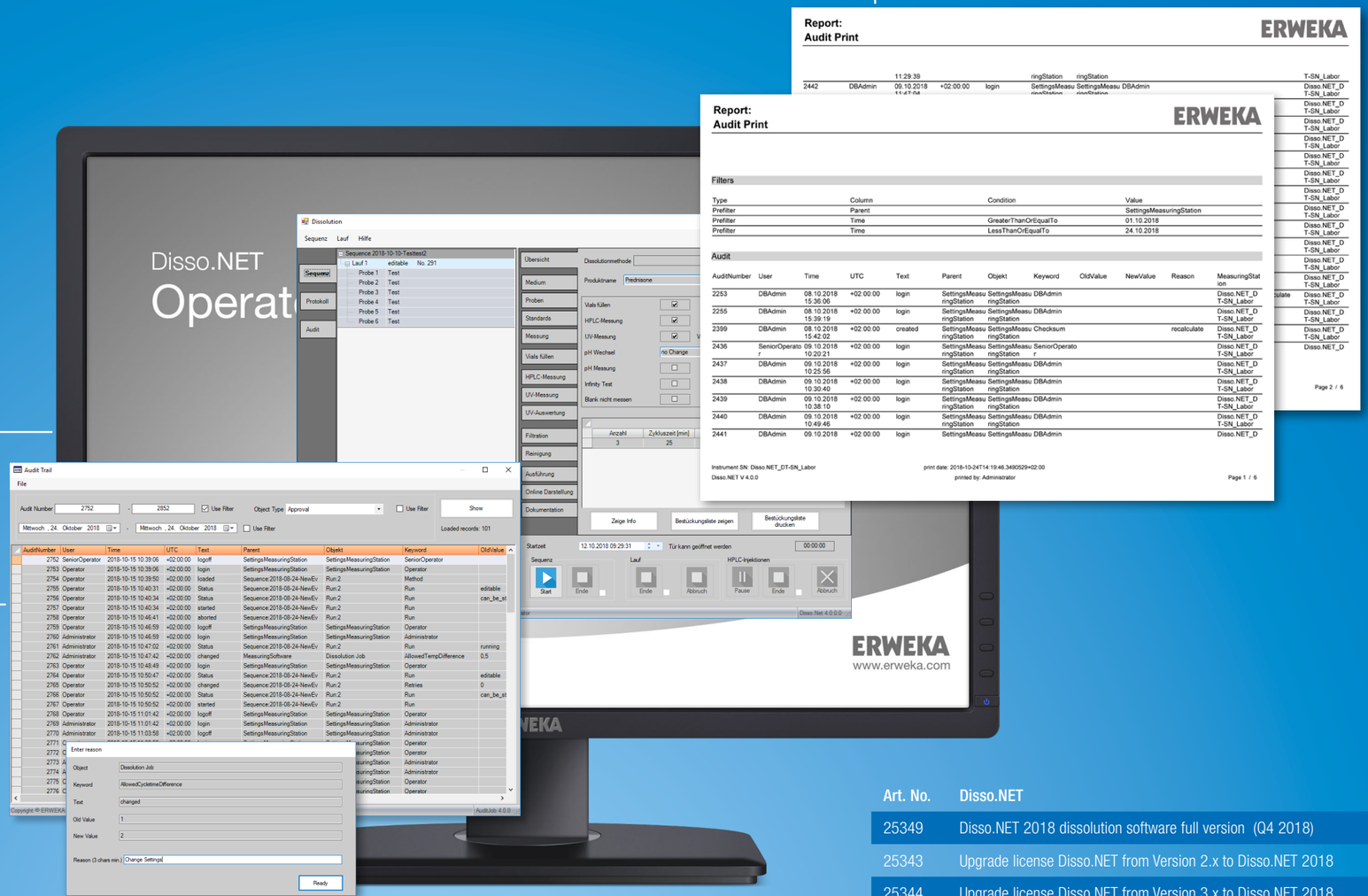
MS SQL Database

User Management

**Disso.NET 2018 with USP 4 support available Q2/2019*

Easy documentation with industry proven features

The documentation features of the Disso.NET 2018 are vast: Easily generate reports about products, tests, audit trail, measurement conditions, UV-Vis and HPLC workflows and export data as PDF, XML and Excel format.



Automated prompt for reason of change

Art. No.	Disso.NET
25349	Disso.NET 2018 dissolution software full version (Q4 2018)
25343	Upgrade license Disso.NET from Version 2.x to Disso.NET 2018
25344	Upgrade license Disso.NET from Version 3.x to Disso.NET 2018
25111	IQ/OQ documents for Disso.NET 2018 Dissolution Software
25350	Software module for Disso.NET 2018 UV-Vis Photometer Qualification (Q1 2019)

Advanced media preparation
in less than 15 minutes

MediPrep 820 Series

The ideal companion for our dissolution systems

The MediPrep 820 series offers quick and easy preparation of up to 8 liters dissolution media in less than 15 minutes. In a single pass, the media for dissolution tests can be precisely mixed, heated, degassed and gravimetrically filled into vessels. Foaming media like SDS (Sodium Dodecyl Sulfate) can also be used.

Gravimetrically controlled filling can be done at the integrated dosing port or with the optional remote filling hand directly into the vessels.

The MediPrep 820 provides one inlet for premixed media and one outlet for waste water. In comparison, MediPrep 821 and 822 offer additional inlets for media concentrates or premixed media. To prevent cross contamination, an automated cleaning procedure is integrated.

Art. No.	MediPrep 820
18605	MediPrep 820
18606	MediPrep 821 with one additional inlet for concentrates/premixed media
18607	MediPrep 822 with two additional inlets for concentrates/premixed media

Highlights

- 100% USP/EP/JP compliant
- 8 liters media for dissolution testing
- Automatic cleaning
- Automatic degassing
- Gravimetrically controlled filling
- Foaming media possible
- Printer support

Chewing Gum Tester
DRT

Highlights

- 100% USP/EP/JP compliant
- Movement by pneumatic cylinder
- Up to 6 test stations
- Mobile cart
- Temperature controlled water bath
- Easy cleaning

Testing for in vitro release of substances from samples into surrounding liquid medium

The ERWEKA DRT is the perfect device for testing of in vitro releases of substances from chewing gums and other dosage forms, that have to be masticated, into the surrounding liquid medium. The vertical up and down strokes of the lower jaw in combination with a revolving movement of the upper jaw provide ideal mastication of the chewing gum and at the same time an agitation of the test medium.

For manual sampling, emptying and cleaning the lower jaw with the test cell can be lowered into a down position, so that the chewing process stops.

The test cell, the upper and lower jaw can then be easily removed. A water circulation system controls and regulates the water temperature in the test cell around the media.

The chewing gum test apparatus is used to masticate gums and then analyzes the speed at which various substances leave the gum (release). In addition, the device is very helpful for developing candy chewing gums, but it can also be used for unusual purposes such as testing of snuff bags.

Art. No.	Chewing Gum Tester DRT
18620	DRT 1 Chewing Gum Tester (1 test station), incl. manual
18621	DRT 2 Chewing Gum Tester (2 test stations), incl. manual
18622	DRT 3 chewing Gum Tester (3 test stations), incl. manual
18623	DRT 4 Chewing Gum Tester (4 test stations), incl. manual
18624	DRT 5 Chewing Gum Tester (5 test stations), incl. manual
18625	DRT 6 Chewing Gum Tester (6 test stations), incl. manual

Multiple media pH change dissolution testing for USP 3 and 7
RRT 10 BioDis

With the ERWEKA RRT 10, automatic dissolution testing of different extended and sustained release dosage forms has become easier than ever before. This unit is perfectly suited for simulating the pH changes within the human body. By placing different media in each row, the device reflects varying in vivo gastrointestinal conditions of the body. An automatic sample transport between the rows allows the reliable testing of the extended or sustained release from different dosage forms in various pH zones. The simple to program RRT 10 is the perfect unit for multiple media pH changes for IV/IVC testing and dissolution profiling of a variety of release dosage forms (e.g. tablets, coated tablets and oblongs).

Vessels are placed inside an acrylic water bath with an outlet valve for easy cleaning and the automatic cover system of the RRT 10 reduces media evaporation.

Highlights

- 100% USP/EP/JP compliant
- 3 configurations available
- Automated evaporation cover
- Different tools available

	USP 3	USP 7	USP 3 & USP 7
Height of stroke	100 mm	20 mm	100 mm & 20 mm (changable)
Vessel types	300 ml & 1000 ml for reciprocating cylinder	50 m, 100 ml, 300 ml & 1000 ml for different types of tools	50 ml, 100 ml, 300 ml & 1000 ml for different types of tools
User changeable method	—	—	✓

Art. No.	RRT 10 BioDis
18532	BioDis dissolution tester RRT 10 USP method 3 with 8 rows
18533	BioDis dissolution tester RRT 10 USP method 7 with 8 rows
18534	BioDis dissolution tester RRT 10 USP method 3 & 7 user changeable, 8 rows

The highlights of the new
USP 4 Flow-Through Cell DFZ II

The new ERWEKA flow-through cell tester DFZ II can be used for various applications thanks to its wide range of available cell types, e.g. for testing poorly soluble products or low-dose formulations with sustained release.

Innovations as the new cell design with increased leak-tightness and the optimized tubing system with quick locks allow a fast preparation and implementation of dissolution tests. The new leaner cell bodies ensure an improved cell warming and can be heated individually. All USP 4 DFZ II systems can be easily controlled with the Disso.NET USP 4 dissolution software via a controller.

Standardized cell head

The new cell head fits all offered cell bodies and thus enables a faster assembly of cells while offering lower purchasing costs. Through a quick lock in the cell head faster tube mounting is also possible.

Increased leak-tightness

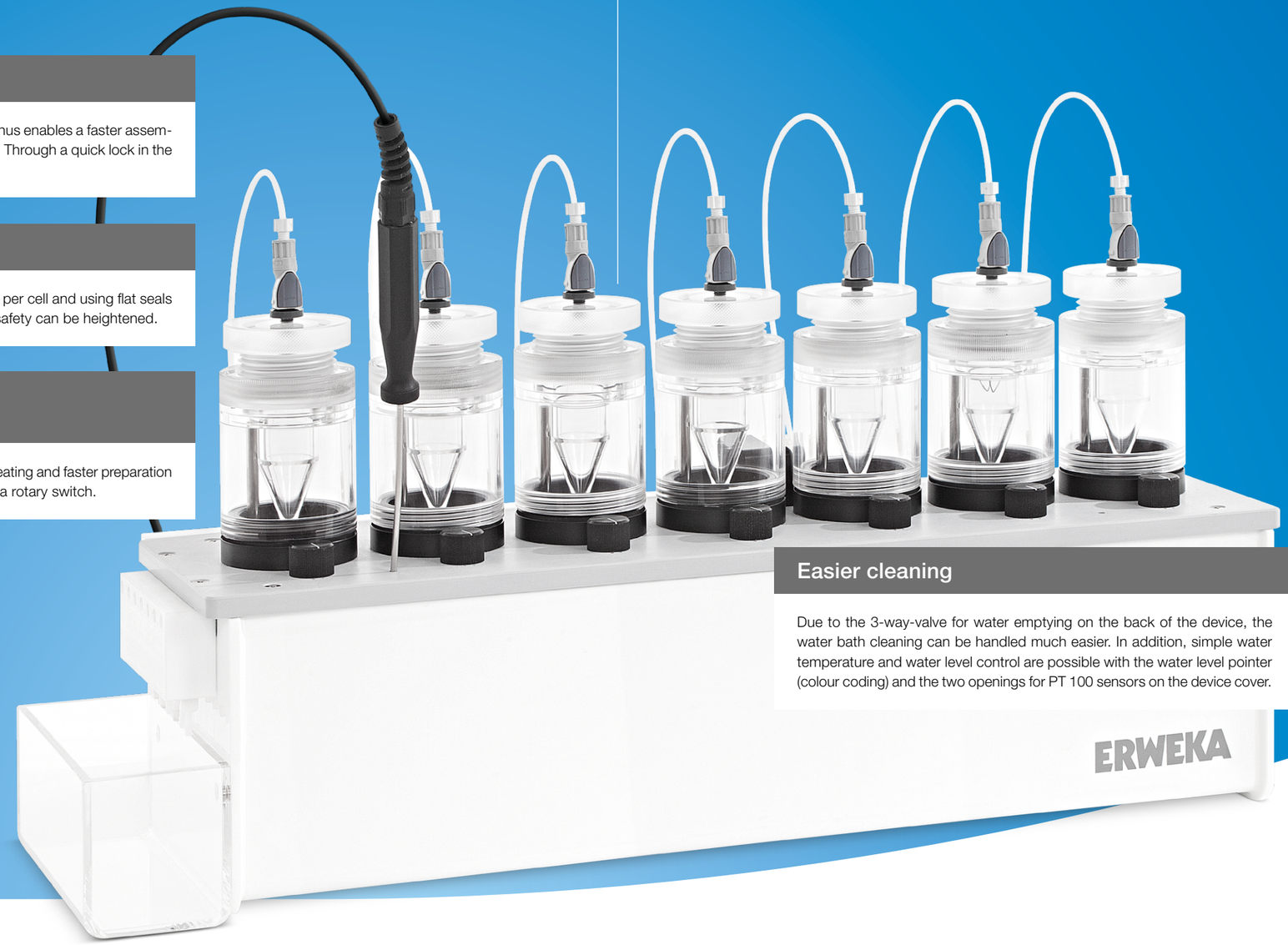
Due to reducing the number of seals to 3 pieces per cell and using flat seals with an increased sealing surface, the process safety can be heightened.

Optimized cell bodies and individual cell heating

The reduction of the cell body provides a better heating and faster preparation of cells. Each cell can be heated individually via a rotary switch.

Compact & corrosion-resistant housing

The smaller footprint with clear arrangement of cells in one line saves laboratory space and offers a perfect visual control of the cells at all times. In addition, the tube organizer on the back of the device prevents mixing up the cell tubes.

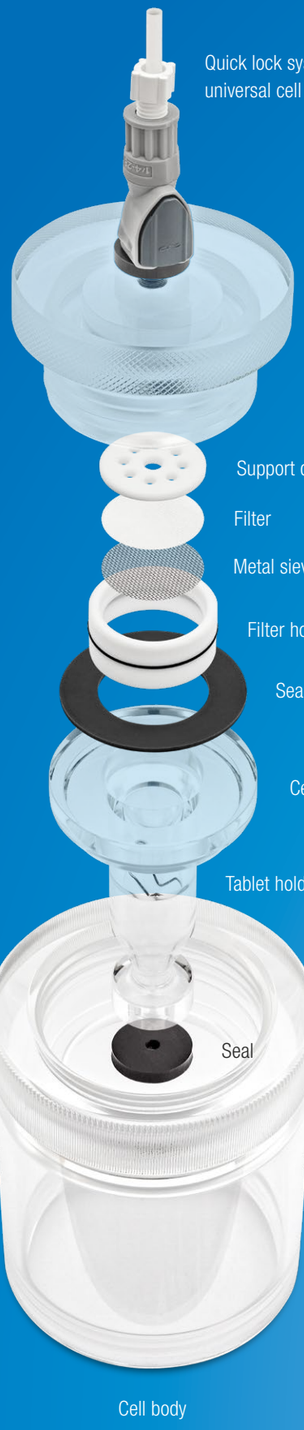


Easier cleaning

Due to the 3-way-valve for water emptying on the back of the device, the water bath cleaning can be handled much easier. In addition, simple water temperature and water level control are possible with the water level pointer (colour coding) and the two openings for PT 100 sensors on the device cover.

Highlights

- 100% USP/EP/JP compliant
- Independent, closed flow-through system
- Variety of different cells available
- Controlled by Disso.NET USP 4



New improved
Cell design

Accompanying our flow-through systems, we offer a variety of different cells with a new improved design for different purposes - from the standard tablet cell to granulate & powder cells to cells for implants, suppositories and stents.

The new standardized cell head fits all offered cell bodies and facilitates along with the new standardized flat seals (only 3 pieces per cell: connection, head and body) handling and assembly of the cells. The optimized cell bodies with decreased cell wall thickness guarantee an improved cell heating.

Thanks to this new cell concept, the cells can be mounted easier to the new flow-through tester DFZ II and thus enable a faster preparation and performance of dissolution tests.

New quick lock system on the cell head allows instant tube removing.

Special temperature calibration head.

Highlights

Variety of different cells available

Standardized cell head

Tool for removing the filter holder

Different cells for different purposes

Tablet cell 12 mm

Tablet cell 22.6 mm

Granulate & Powder cell

Implant cell

Suppository cell

Stents cell

Tablet cell 22.6 mm with one-way dialysis adapter

Tablet cell 22.6 mm with cream adapter

Tablet cell 22.6 mm with glass beads & tablet holder

Tablet cell 22.6 mm with glass beads & without tablet holder

Easy entry into USP 4 dissolution testing

USP 4 Stand-Alone System

The ERWEKA stand-alone flow-through cell system is perfect for performing simple release tests with manual sampling. Therefore, the new flow-through cell tester DFZ II offers with the ERWEKA piston pump HKP 720 and the ERWEKA heater DH 2000i an easy entry into testing with USP 4 systems for a small budget.

The valve-free piston pump transports the test medium with highest precision via seven channels to the flow-through cells and automatically adopts the setting of the flow rate. With the low-vibration heater the water in the water bath can be quickly heated to the required temperature.

Highlights

- 100% USP/EP/JP compliant
- Flow-through cell with 7 test stations
- Simple release testing with manual sampling

Art. No.	USP 4 Stand-Alone System
23437	DFZ II Stand-Alone Flow-through-cell with HKP 720
23439	DFZ II Stand-Alone Flow-through-cell with HKP + temperature sensor
23440	DFZ II Stand-Alone Flow-through-cell with IPC-8

USP 4 Dissolution Testen with automated analytic

USP 4 Closed Online System

The USP 4 Closed Online System is our solution with automated analytic for the USP 4 flow-through cell. The software controlled USP 4 system integrates USP 4 flow-through cell testing with directly connected analytic UV/Vis online measurement, resulting in an automated USP 4 workflow.

Furthermore, all features of the stand-alone system can be applied to our online system: the valve-free piston pump with highest precision and the low-vibration heater steadily holds the requested temperature of the waterbath. And our new and improved DFZ II USP 4 cells are also integrated into the software dialogs, making the use of the system as easy as possible.

Art. Nr.	USP 4 Stand-Alone System
25354	UV-Vis Online System DFZ II, HKP720, IPC 8, Shimadzu 1900, Controller+Disso.NET
25355	UV-Vis Online System,HKP720,DFZ II -Temp.,IPC8,S-himadzu1900,Controller,Disso.NET

Highlights

- 100% USP/EP/JP conform
- Flow-through cell with 7 test stations
- Software controlled by Disso.NET
- Integrated UV-Vis analytic
- Audit Trail

USP 4 Open Offline System

Features of the automated USP 4 Open Offline System

- Handling of unlimited media for testing of low soluble drug substances
- Fully USP compliant
- Automated sample collection
- Sampling of complete fractions into glass vials
- Sampling of representative fractions by splitting into waste and glas vials

Art. No.	USP 4 DFZ II Open Offline System
23441	Open Offline System, DFZ II with HKP 720, FRL 724, Controller, Disso.NET USP 4
23442	Open Offline System,DFZ II, temp.sensor, HKP 720, FRL 724, Controller, Disso.NET
23443	Open Offline System, DFZ II, IPC-8, FRL 724, Controller, Disso.NET
18590	Manual switching valve for pH change USP 4
18591	Electronic switching valves 4x for pH change for up to 4 media

USP 4 Closed Offline System

Art. No.	USP 4 DFZ II Closed Offline System
23446	Closed Offline System DFZ II, HKP 720, IPC-8, FRL 724, Controller, Disso.NET
23447	Closed Offline System DFZ II, temp.sensor, HKP 720, IPC-8, FRL 724, Controller,
17923	LMT 2 Closed Loop unit for USP 4 incl. 500 ml bottles (7 pcs)
19897	100 ml glass bottle (7 pcs.) for LMT 2 (safety cap not included)
19898	250 ml glass bottle (7 pcs.) with safety cap for LMT 2
20376	1000 ml glass bottle (7 pcs.) for LMT 2
18602	Filter for USP 4, 0.7µm, 25 pcs, 25 mm
18603	Filter for USP 4, 1.4µm, 25 pcs, 25 mm

Features of the USP 4 Closed Offline System

- Specific amount of min. 2 ml to max. 32 ml of media is pumped through the cell continually
- Media transfer station LMT 2 with 8x 1000 ml vessels
- Fully USP compliant
- Fraction collection with 3-way valves
- Long duration test runs with optimized media evaporation
- Media replacement possible

ERWEKA

Easy media transfer with the
LMT 2

With the compact ERWEKA media transfer station LMT 2 a closed loop for performing long-term dissolution tests according to USP 4 can be easily created. The LMT 2 is therefore used as a medium reservoir and ensures an optimal media mixing and distribution through the whole release test.

The optimized tubing system with a new tube holder and rotatable bottle caps (safety caps) makes handling easier and saves valuable laboratory space. Using standardized laboratory glass bottles as media vessels also enables an easier media transport for saving and further analysis. The glass bottles are available in 500 ml as standard size and optionally in the sizes 100 ml, 250 ml and 1000 ml. With the comfortable keypad the stirring speed can be easily set.

Highlights

- 100% USP/EP/JP compliant
- Wide range of vessel sizes
- Improved tubing
- Optimal media distribution

Full dissolution software solution for Flow-Through Cell
Disso.NET 2018 USP 4*

The ERWEKA Disso.NET USP 4 Software is the perfect companion for our USP 4 systems. The software takes over full control of our USP 4 systems and offers support for all USP/EP dissolution cells used in these systems. It also supports cells for special applications (e.g. cell with cream adapter) and visual guides for formulation placing in the respective cells.

Disso.NET helps you with standard USP 4 dissolution jobs, handles qualifying tasks and provides control over each single function of the connected devices (e.g. pump, flow-through cell and sample collector). In addition, the software includes an easy to handle method editor for comfortable programming of dissolution methods (for highest safety in GMP environment). Our audit trail also generates detailed protocols of all events and times and thus enables tracing changes at any time.

*available Q1/2020

Highlights

- Audit Trail
- Easy control of the USP 4 systems with Disso.NET
- MS SQL Database
- Advanced report generation

Dissolution Tester

General Options

Art. No.	General Options
18331	2000 ml version, additional price for DT 62x/72x/82x
18332	Print LAN converter for the data transfer to network printers
18333	External cooling device for DT with autonomous operation
18334	Evaporation cover for DT HH manual sampling
21795	Evaporation cover with anti-rotation device for DT HH with ASS- 8 /14
18335	Illumination of the DT water bath
18336	Automated tablet drop magazine for DT 72x/82x
18337	Automated tablet drop magazine for DT 141x/161x
18338	Video system USB 3.0 with 6 cameras for dissolution test monitoring
18339	Spare part kit for DT 6/7/82x
22342	Water stabiliser with colour indicator for DT, 100 ml blue

Water stabilizer 100 ml, blue

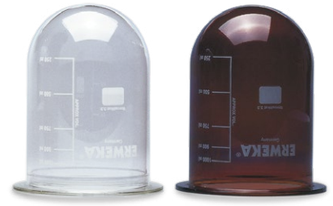
Evaporation cover for DT HH

Evaporation cover with anti-rotation device for DT HH with ASS-8/14 sampling station

Art. No.	CoC (Certificate of Compliance)
18395	CoC for basket, per basket
20267	CoC for basket holders for LH / HH, per holder
18414	CoC for paddle over Disk, per Disk
20268	CoC paddle, per paddle
20269	CoC for shaft LH / HH, per shaft
22444	CoC for bundle, paddle, basket holder
18369	CoC for vessels, per vessel
20272	CoC for mini vessel, per vessel
22449	CoC for rotating cylinder, per rotating cylinder

Vessels and Mini Vessels

Art. No.	Vessels
18365	Vessel for DT, glass, 1000 ml, numbered
18366	Vessel for DT, UV-resistant amber glass, 1000 ml, numbered
18367	Vessel for DT, glass, 2000 ml, numbered
18368	Vessel for DT, UV-resistant amber glass, 2000 ml, numbered
19115	Vessel with peak for DT, glass, 1000 ml
18370	Rack for 8 vessels
18371	Rack for 8 paddles, baskets
18372	Rack for 16 paddles, baskets

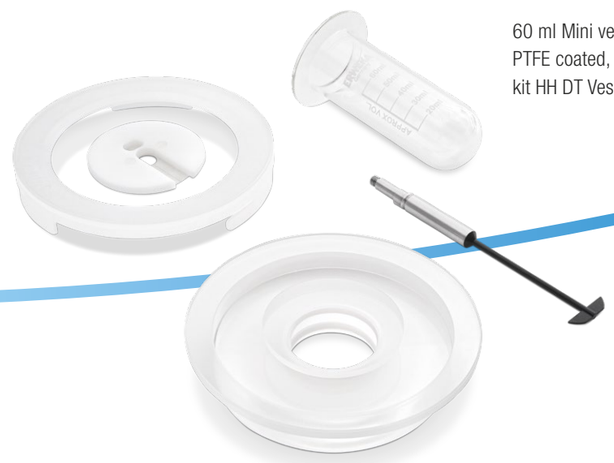


Glass vessel and UV-resistant vessel

60 ml, 100 ml and 400 ml Vessel

Art. No.	Mini vessels
18373	Mini vessel for DT, glass, 400 ml, numbered
18374	Mini vessel for DT, UV-resistant amber glass, 400 ml
18375	Conversion kit for 400 ml Mini vessel (excluding vessel)
18378	Automated sampling station (LH) for Mini vessel 400 ml, for DT-72x/82x
19978	Automated sampling station (HH) for Mini vessel 400 ml, for DT-72x/82x
20482	100 ml Mini vessel, Mini paddle Fluoropolymer, incl. conversion kit HH DT vessel
20575	60 ml Mini vessel, Mini paddle Fluoropolymer, incl. conversion kit HH DT
21598	60 ml Mini vessel amber glass, Mini paddle and Adaption for HH Dissolution Tester
22399	Conversion kit 1000 ml to 400 ml including Mini vessel and Mini paddle LH
22398	Conversion set 1000 ml to 400 ml including Mini vessel and Mini paddle HH

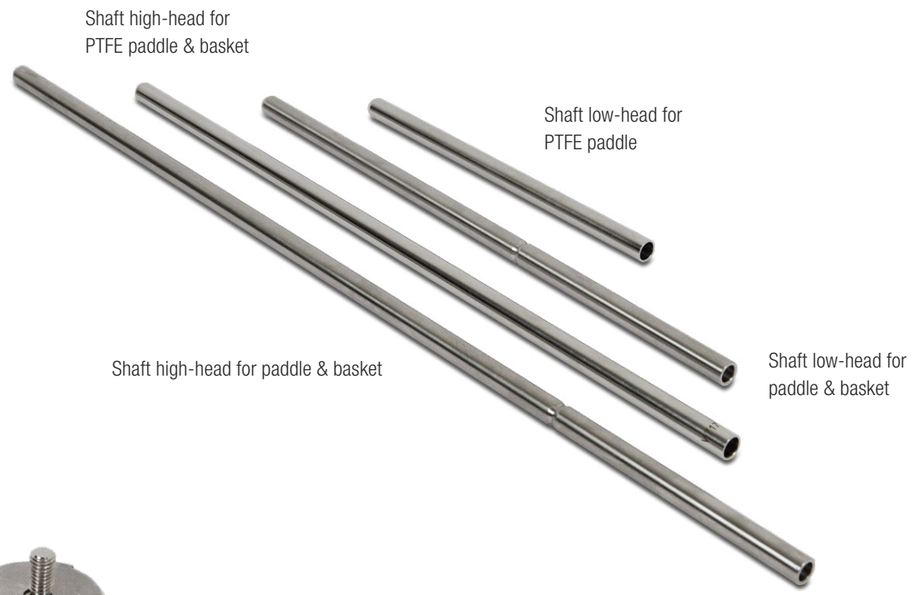
The 400 ml Mini vessel apparatus is a reduced scale of the USP method 2, commonly used for low-dose formulations and poorly available drugs.



60 ml Mini vessel, Mini paddle PTFE coated, incl. conversion kit HH DT Vessel

Dissolution Accessories

Art. No.	DT Shafts for USP Methods 1, 2, 5, 6
22391	Shaft unit LH for basket or paddle (st. steel) or Bundle (st. steel), incl. carrier, numbered
22436	Shaft unit LH for paddle (PTFE coated), numbered
22438	Shaft set (2) LH for bundle basket holder + PTFE coated paddle, numbered
22394	Shaft unit HH for basket or paddle (st. steel) or Bundle (st. steel), incl. carrier, numbered
22437	Shaft unit HH for paddle (PTFE coated), numbered
22439	Shaft set (2) HH for Bundle basket holder + PTFE coated paddle, numbered

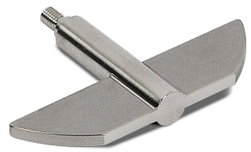


NEW: Basket holder, stainless steel,
2 O-rings, numbered

Art. No.	Baskets USP 1
22402	Basket holder, stainless steel, numbered
18391	Basket, mesh 10, stainless steel, numbered
18392	Basket, mesh 20, stainless steel, numbered
18393	Basket, mesh 40, stainless steel, numbered
18394	Suppository basket, plastic

Baskets mesh 10, 20 and 40 (standard)

Art. No.	Paddles USP 2
22403	Paddle, stainless steel, numbered
22404	Paddle (PTFE coated) for 1000 ml, numbered
22405	Paddle (PTFE coated) for 2000 ml, numbered
22406	Bundle, paddle and basketholder, stainless steel, numbered
22407	Bundle, paddle (PTFE coated), and basket holder, stainless steel, numbered



Paddle, stainless steel, numbered

Bundle, paddle (PTFE coated) &
basket holder, stainless steel

Art. No.	Paddle over Disk USP 5
18412	Paddle over Disk spacer to use standard paddle and shaft
18413	Paddle over Disk USP 5, for holding transdermal patch, mesh 125 µm, numbered
21443	Paddle over Disk, high and low head USP 5, 2 9/16 inch, numbered
21444	Paddle over Disk, high and low head USP 5, 3.5 inch, numbered

Paddle over Disk USP 5, for holding
transdermal patch, mesh 125 µm, numbered

Rotating Cylinder

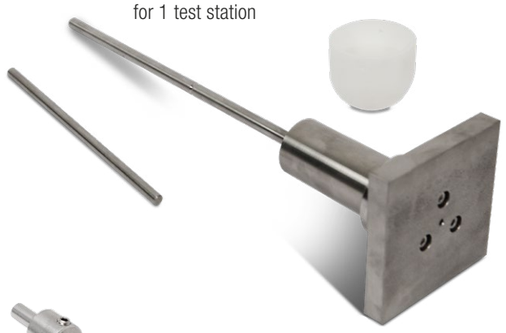
Art. No.	Rotating Cylinders USP 6
22408	Rotating cylinder, stainless steel, short, numbered
22409	Rotating cylinder, stainless steel, long, numbered

Extraction Cell

Art. No.	Extraction Cell
18421	Extraction cell, ID=20/27 mm, acc. to EP 2.9.4
22252	Extraction cell, ID=32/38 mm, acc. to EP 2.9.4
22253	Extraction cell, ID=40/45 mm, acc. to EP 2.9.4
22254	Extraction cell, ID=50/52 mm, acc. to EP 2.9.4

Art. No.	Felodipine basket
18422	Felodipine stationary basket for low-head use
18423	V-shaped low head vessel cover (plastics) for fixing Felodipine basket
18424	V-shaped vessel cover (PTFE coated) for fixing Felodipine basket
18425	Felodipine stationary basket for high-head use
18426	Low-evaporation high-head vessel cover (plastics) for fixing Felodipine basket
22411	ERWEKA Wood Apparatus (intrinsic) for 1 test station
18429	Manual hydraulic press for Wood Apparatus

Wood Apparatus
for 1 test station



Felodipine stationary basket

Art. No.	Sinkers
18379	Japanese sinkers, set of 6 pcs, stainless steel, USP compliant
18380	Spider sinkers, plastic, set of 6 pcs

Japanese sinkers,
set of 6

Spider sinkers, plastic,
set of 6

Art. No.	Enhancer Cell
22400	Enhancer cell set, incl. 200 ml vessel round bottom and mini paddle HH
22401	Enhancer cell set incl. 200 ml flat bottomed glass, mini paddle, HH shaft
18382	Vessel for Enhancer cell, 200 ml, glass, rounded bottom
18384	Enhancer cell (fluoropolymer) for testing creams, ointments, gels
21612	Vessel for Enhancer cell, 200 ml, glass, flat bottom

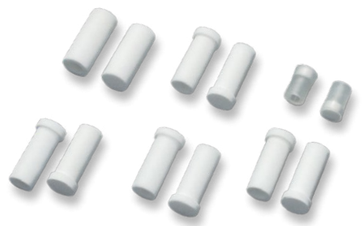
Enhancer Cell

Plastic funnel

Art. No.	Funnel for granulates
18381	Plastic funnel with extension for pouring granulates / powder

Consumables

Art. No.	Inline Filters
18430	Filters (1.000 pcs), Poroplast, 1 µm
18431	Filters (1.000 pcs), Poroplast, 4 µm
18432	Filters (1.000 pcs), Poroplast, 10 µm
21702	Filters (10.000 pcs), Poroplast, 10 µm
18433	Filters (1.000 pcs), Poroplast, 20 µm
18434	Filter, stainless steel, 20 µm
18435	Filter, stainless steel, 50 µm
18436	Filter, stainless steel, 100 µm



Different types of filters

Art. No.	Membrane Filters
22954	Filter (200 pcs) Pall Acrodisc nylon 0,45 µm, 25 mm, Autopack for AFC
22955	Filter (200 pcs) Pall Acrodisc glasfibre 1 µm, 25 mm, Autopack for AFC
22956	Filter (200 pcs) Pall Acrodisc nylon 0,2 µm, 25 mm, Autopack for AFC
18500	1 pack of filters (200 pcs), membrane 0.45 µm ROBY
18501	1 pack of filters (200 pcs), membrane 0.7 µm ROBY
18502	1 pack of filters (200 pcs), membrane 1 µm ROBY

Art. No.	PVT Reference Tablets
18441	Prednisone tablets, 1 pack (30 pcs)
18442	Prednisone, 250 mg

Refernce Tablets

Mechanical Calibraion

Art. No.	Tools Mechanical Calibration
18437	Dissolution tester qualification kit
18438	Dissolution tester validation kit according to FDA, certified
18439	Qualification kit (upgrade) according to Mechanical Calibration standards of FDA
18440	Validation tool for height adjustment, certified

Art. No.	QA Dokumente
20477	IQ/OQ/PVT documents for DT 126/128 light
18443	IQ/OQ/PVT documents for DT 62x/72x/82x Series / Mechanical Calibration acc. FDA
18444	IQ/OQ/PV documents for DT 141x/161x Series, Mechanical Calibration according FDA

Manual Sampling

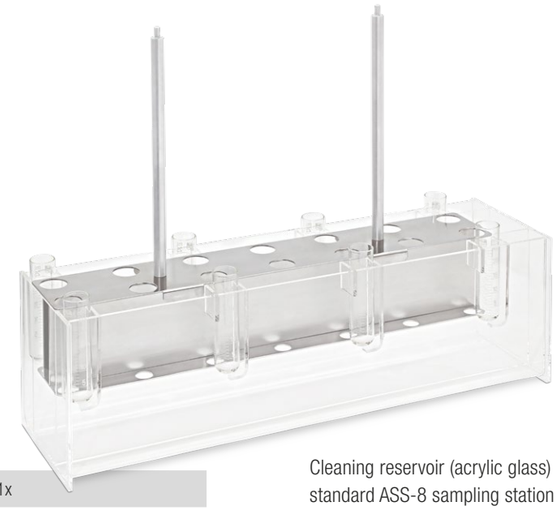
Art. No.	Manual Sampling
18357	Manual sampling cannula LH USP 1 (basket), stainless steel
18355	Manual sampling cannula LH USP 2 (paddle), stainless steel
18361	Manual sampling cannula HH USP 1 (basket), stainless steel
20422	Manual sampling cannula HH USP 2 (paddle), stainless steel
20411	Manual sampling cannula LH USP 1 (basket), stainless steel for 2000 ml vessel
20425	Manual sampling cannula LH USP 2 (paddle), stainless steel for 2000 ml vessel
18363	Syringe connected to stainless steel sampling probe
18364	Eppendorf single handedly operating sampling pipette, LH DT
21329	Manual sampling cannula with refill tube for 60 ml vessel HH-USP 2 (paddle)

Manual sampling cannula, LH USP 1 with
syringe connected to stainless steel sampling probe

Syringe connected to stainless steel
sampling probe

Manual sampling cannula, HH USP 1 with
syringe connected to stainless steel sampling probe

Automated Sampling

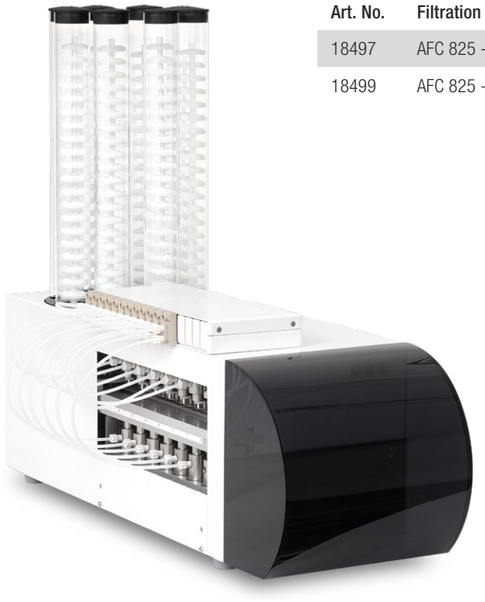


Cleaning reservoir (acrylic glass)
standard ASS-8 sampling station

Art. No.	Automated Sampling
18340	DT-i-Version upgrade for DT 72x/ 82x/141x/161x
18341	ASS-8 LH autom. sampling station, PTFE coated tubing 3.0 mm, DT 72x/82x
18342	ASS-8 LH PT 100 autom. sampling station LH, PTFE coated tubing 3.0 mm
18343	ASS-8 HH autom. sampling station, tubing PTFE coated 3.0 mm
18344	ASS-8 HH PT 100 autom. sampling station, fluoropol. tubing
18345	Auto Sampling Station ASS-8 for preconfigured DT (without motor)
18348	Titanium sampling tubes for ASS-8 autom. sampling station
18349	Titanium sampling tubes for ASS-14 auto sampling station
18346	PT 100 Electronic temperature sensors (8)
18347	DFS Double Filtration Station for DT Systems
18350	Cleaning reservoir (acrylic glass) standard ASS-8
18352	Cleaning reservoir for ASS-8 sampling station w. Disso.NET
18351	Cleaning reservoir for ASS-16 for DT 141x/161x
18353	Spare part kit for DT 82x w. ASS-8
18354	Spare part kit, DT82x w. ASS-8 autom. sampl. station & 8 temp.sensors

Automated sampling station ASS-8 on
top of a DT from the DT 720 series

Dissolution System Options



AFC automatic membrane filter exchange system

Art. No.	Filtration
18497	AFC 825 - 12 V membrane filter exchange system for 6 stations
18499	AFC 825 - 16 V membrane filter exchange system for 8 stations

Art. No.	FRL sample collector
18506	Titanium filling tubes for FRL 820/824
18507	Rack for 26 x 8 glass tubes, 12 ml, including 250 glass tubes
18508	Rack for 18 x 8 glass tubes 25 ml, including 150 glass tubes
18509	Rack for 26 x 8 HPLC vials, 1.8 ml
18510	Rack for 26 x 8 glass tubes, 4.0 ml
18511	Recalibration rack for HPLC vials 1.8 ml and 4.0 ml

Rack with HPLC vials

Art. No.	QA Documents
18529	IQ/OQ/PVT documents for Offline System
18530	IQ/OQ/PVT documents for Online System
18531	IQ/OQ/PVT documents for On-/Offline System UV-Vis

Sampling into UV-Vis glass tubes

Art. No.	Glass tubes for FRL
18512	Glass tubes 12 ml, 100 pcs. for FRL Rack
18513	Glass tubes 25 ml for FRL, 100 pcs.
18514	Glass tubes amber glass 25 ml, 100 pcs.

Art. No.	Cuvettes for UV/Vis
18515	Cuvette, 0.1 mm path length
18516	Cuvette, 0.2 mm path length
18517	Cuvette, 0.5 mm path length
18521	Cuvette, 10 mm path length, flow-through optimised (standard)
18518	Cuvette, 1 mm path length
18519	Cuvette, 2 mm path length
18520	Cuvette, 5 mm path length
19945	All-quartz cuvette with two optical path lengths, 10 and 1 mm
18522	Cuvette, 20 mm path length, (only AGILENT)

Art. No.	Others
18523	Pre-heating unit for substitute media (offline systems only)
23172	Metrohm ph-meter for usage with Disso.NET

Contact

Are you curious and want to find out more?
Head over to our website and download our product brochures, watch videos of our equipment in action or find the ERWEKA dealer of your country.

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