Dissolution: DISi Series

Expertly engineered systems for everyday dissolution testing

Meeting the latest specifications as laid down in the European, United States and associated Pharmacopoeias, the DISi Series from Copley is a range of reliable and cost-efficient dissolution tester systems designed with the highest standards of solid dosage testing performance in mind.

Ideal for use in both R&D and QC environments, the DISi Series is equipped with precision ground shafts that will accept any of the baskets, paddles or rotating cylinders described in the Ph. Eur., USP and associated Pharmacopoeias.

Designed to minimise user training and reduce the burden of routine equipment maintenance, the DISi Series simplifies the dissolution testing process, without compromising on data quality.

- Ph. Eur. and USP compliant
- Integrated, precision temperature control and measurement
- Intuitive touchscreen control to simplify operation
- Single-point electronic temperature calibration
- Six and eight test station unit configurations available
- Extensive data output options
- Wide speed range to accommodate broad scope of methods
- Option to automate and remotely control DISi Systems

INNOVATIVE
COMPLIANT
TRUSTED

DISi Series: Key Features

Easy-clean Viton® membrane-sealed *zero-evaporation* lids included as standard

Intuitive touchscreen control with icon-based menu structure simplifies operation

Robust metal case with advanced corrosion protective coating

PT100 temperature probe monitors bath and vessel temperature with electronic calibration feature

Independent digital heater/circulator maintains a constant temperature and minimises vibration

Easily removable leak-proof water bath with convenient drain tap eases bath water emptying

All vessels are serial-numbered as standard

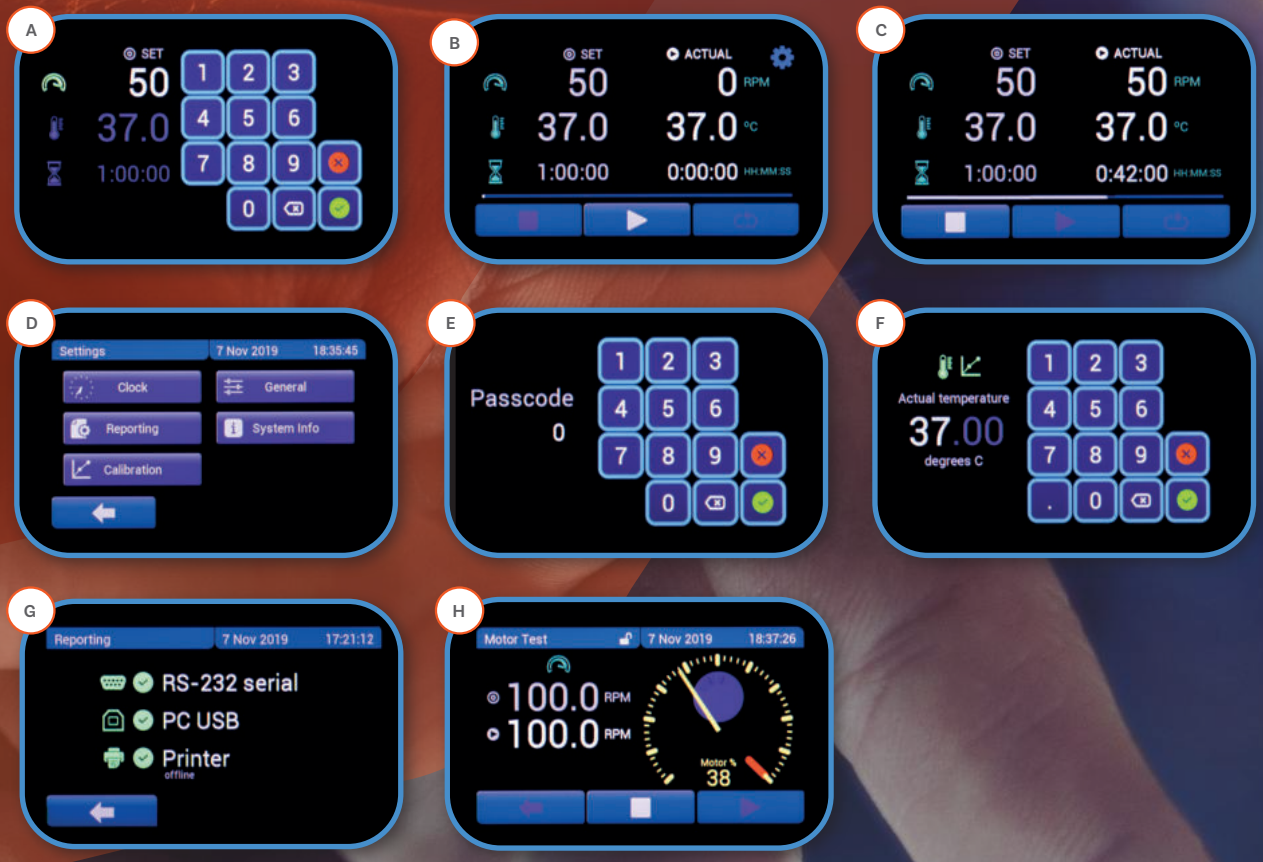
Maximum fill line indicator

Note:
Full automation-compatible to support high-throughput workflows

Convenient screw-in basket/paddles enable easy method change in seconds

'Easy-Centre' centring system for precise vessel positioning

DISi Series: Touchscreen User Interface



Key Features:

- **Intuitive menu structure** enables users to locate features quickly and easily
- **Easy-set** user-configurable **test parameters**:
  Speed (revolutions per minute)
  Temperature (°C)
  Test duration (HH:MM:SS)
- Status of **'Actual' v 'Set'** test **parameters clearly displayed** throughout testing
- **Test progress bar** provides clear and constant indication of run status
- Resistive touchscreen interface can be **operated with gloves on**
- Hygienic **wipe-clean** screen
- **Passcode-protected** temperature calibration
- High productivity - **easy system set-up** and **operation** minimises training burden

A Setting a test parameter

B Set v Actual test parameters (before test run)

C Set v Actual test parameters (during test run, with test progress bar)

D Settings menu

E Passcode-protected temperature calibration process

F Temperature calibration

G Report output settings menu

H Motor speed (RPM) verification

Reporting

Extensive data output options are available as standard, including direct reporting to a printer or PC.

Reported parameters

- **Speed (revolutions per minute)**
  Set
  Average
  Maximum
  Minimum
- **Temperature (°C)**
  Set
  Average
  Maximum
  Minimum
- **Test Duration (HH:MM:SS)**
  Set
  Actual
- **Calibration Data**
  Calibration date
  Temperature calibrated at (°C)

RS 232

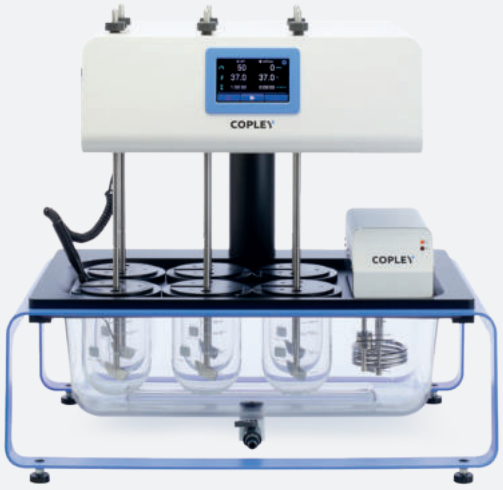
USB A

USB B

Compliance & Maintenance

- ✓ Certificate of compliance to Ph. Eur./USP provided as standard
- ✓ Comprehensive IQ/OQ/PQ documentation packages and toolkits available
- ✓ Passcode-protected single-point electronic temperature calibration
- ✓ Latest temperature calibration information stored and available to export/print

Choose your DISi Dissolution System



DIS 600i

With bench space a premium in many laboratories, the DIS 600i is one of the most compact dissolution testers available on the market today.

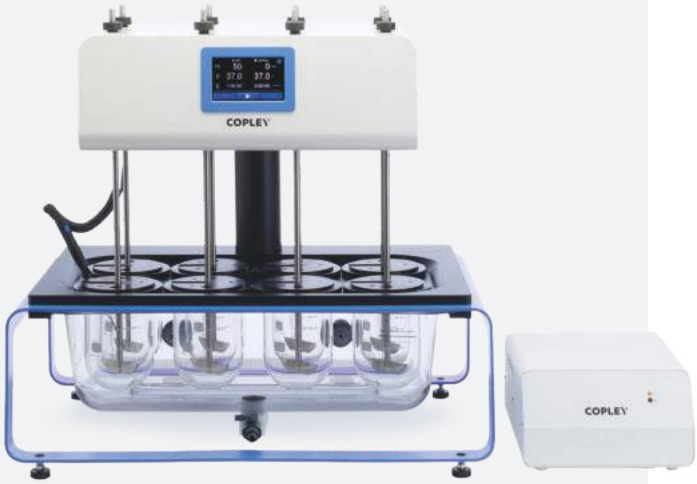
Cat. Number
1336

No. Stirred Vessels
6

Ph. Eur. and USP Test Methods Supported
1, 2, 5, 6

Heater
Low vibration integrated digital heater/circulator

Unit Dimensions (w x d x h)
728 x 495 x 689 mm



DIS 800i

Maximising visibility and access to the critical sampling area above the bath, the DIS 800i represents the very latest in tablet dissolution testing technology.

Cat. Number
1338

No. Stirred Vessels
8

Ph. Eur. and USP Test Methods Supported
1, 2, 5, 6

Heater
Low vibration independent external digital heater/circulator

Unit Dimensions (w x d x h)
728 x 495 x 689 mm (unit)
260 x 330 x 150 mm (heater)

DISi Series: Technical Specifications	
Pharmacopoeial Compliance	Ph. Eur. Chapters: 2.9.3, 2.9.4 USP Chapters: <711> <724>
User Interface	Resistive touchscreen
Speed Range	20 - 220 rpm +/- 2%
Heater Accuracy	± 0.1°C
Heater Temperature Range	Ambient - 50 °C
Vibration Elimination	Low vibration heaters
Test Run Time	Up to 99 hours, 59 minutes, 59 seconds
Alarm(s)	**1.** End of testing (audible) **2.** Low bath water level warning on-screen indicator
Data Output	RS 232 USB A (for connection with a USB printer) USB B (for connection with a PC)

Temperature Calibration

Single-point electronic temperature calibration. Calibration of the DISi Series temperature probe is simple, through the use of an electronic calibration key and passcode-protected calibration menu designed to guide users through the process without fuss. The latest temperature probe calibration information is stored and available to print/export when convenient to the user.

DISi Series

Cat. No.	Description
1336	Dissolution Tester DIS 600i (incl. 6 Drive Shafts)
1338	Dissolution Tester DIS 800i (incl. 8 Drive Shafts)
1209	Electronic Temperature Calibration Key
1309	IQ/OQ/PQ Documentation Pack
1307	Printer (including USB cable)

Electronic Temperature Calibration Key

Choose your DISi System Accessories

All DISi Series are equipped with precision-ground shafts that will accept any of the baskets, paddles or rotating cylinders described in the Pharmacopoeias. Each clutch can be raised, lowered or engaged independently of the drive head, ensuring users have maximum accessibility to the vessels, whilst also making the systems suitable for staggered starts.

Each element can be supplied with a Teflon coating for additional protection against aggressive media, if required and can be laser numbered and certified upon request.

Baskets, Paddles & Rotating Cylinders

Basket Stirring Elements (Ph. Eur. /USP Method 1)

Cat. No.	Description
1302B	Set of 6 Baskets (Ph.Eur./USP Method 1)
1302A	Set of 8 Baskets (Ph.Eur./USP Method 1)
1302	Basket **only** in 316 Stainless Steel (40 mesh)
1317	Basket Holder in 316 Stainless Steel
1331	3-Prong Retention Spring in Hardened 17-7 Steel
1333	Basket Stirring Element **complete** with Drive Shaft

Paddle Stirring Elements (Ph. Eur. /USP Method 2)

Cat. No.	Description
1304B	Set of 6 Paddles (Ph.Eur./USP Method 2)
1304A	Set of 8 Paddles (Ph.Eur./USP Method 2)
1304	Paddle **only** in 316 Stainless Steel
1341	Paddle Stirring Element **complete** with Drive Shaft
1343	Paddle Stirring Element **complete** – Teflon Coated

Dissolution Drive Shaft

Cat. No.	Description
1329	316 Stainless Steel Drive Shaft only

Capsule Sinkers & Weights

Cat. No.	Description
1356	Set of 6 316 Stainless Steel Sinkers
1356A	Set of 8 316 Stainless Steel Sinkers
1345	Set of 6 USP/Ph.Eur. Alternative Sinkers
1345A	Set of 8 USP/Ph.Eur. Alternative Sinkers
1348	Wire, 316 Stainless Steel (50 ft length)
1357	Set of 6 3-Prong Plastic Sinkers

Vessels

Compliant with Ph. Eur. and USP specifications, all DISi Series vessels feature unique Easy-Centre systems ensuring perfect positioning every time. Locking the vessel into the correct position relative to the drive shaft, the fixture ensures that the vessels will not become loose or float, even when empty. UV-resistant vessels are also available for products sensitive to UV.

Easy-clean Viton® membrane-sealed low evaporation lids are included as standard with each vessel.

Vessels

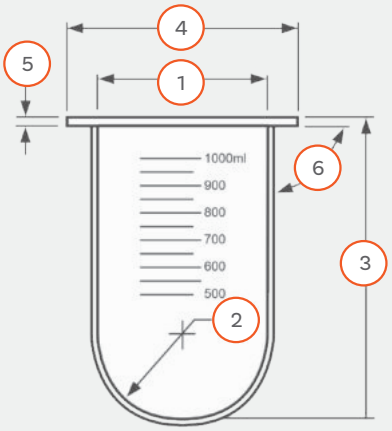
Cat. No.	Description
1344	Vessel, 1000 mL
1346	Vessel, 1000 mL, with “Easy-Centre”
1352	Amber Vessel, 1000 mL
1349	Amber Vessel, 1000 mL, with “Easy-Centre”
1366	“Easy-Centre” Vessel Ring

EMC Ultra-Precision Dissolution Vessels

With dimensional tolerances a factor of 2 higher than those specified in the FDA Enhanced Mechanical Calibration, the EMC Ultra-Precision Dissolution Vessel brings even higher levels of accuracy to dissolution testing.

All relevant parts are individually serialised as standard.

1. Inside Diameter	101.19 +/- 0.13 mm
2. Inside Spherical Radius	50.59 +/- 0.13 mm Radius
3. Height (Inside Spherical Radius to top)	154.75 +/- 0.50 mm
4. Flange OD	120.00 +/- 0.50 mm
5. Flange Thickness	3.50 +/- 0.50 mm
6. Perpendicularity (Inside Vessel Dia. to Flange Underside)	0.50° Max



Cat. No.	Description
1398	EMC Dissolution Vessel, 1000 mL, with “Easy-Centre”

Vessel Cover for DIS 600i/800i

Automatic Tablet Drop Vessel Cover for DIS 600i/800i

Vessel Covers

Cat. No.	Description
1354	Vessel Cover for DIS 600i/800i
1393	Automatic Tablet Drop Vessel Cover (Set of 6 for DIS 600i)
1394	Automatic Tablet Drop Vessel Cover (Set of 8 for DIS 800i)
1355	Plug for Vessel Cover

Automatic Tablet Drop

Eliminate the need for time-lag correction factor calculations with the Automatic Tablet Drop system. Guaranteeing simultaneous tablet ejection at the start of the test run, synchronised sampling is simplified.

Automatic Tablet Drop

Cat. No.	Description
1393	Automatic Tablet Drop Vessel Cover (set of 6 for DIS 600i)
1394	Automatic Tablet Drop Vessel Cover (Set of 8 for DIS 800i)

Sampling Probes

Choose from a range of dissolution sampling probe systems, optimised for different user requirements:

1. **Manual sampling cannula**: with a Luer fitting to accept a 20 mL syringe, bent at the top to enable easy positioning within the dissolution vessel.

2. **Resident probe**: designed to be left *in-situ* in the dissolution vessel for the duration of the test and is height adjustable, in accordance with differing methods described in the pharmacopoeias. 3 different types are available:

a. For automated systems: fitted with Omnifit fittings used in conjunction with the return line inserts
b. For automated systems: fitted with Omnifit fittings
c. For manual sampling (with Luer fittings)