



General applications: Centrifuges universal

Series DIGICEN 21

SPHERA GROUP s.r.o.
info@sphera-group.cz
Tel: +420 226 886 248
Průmyslová 7 Business Park
102 00 Praha, Czech Republic

DIGICEN 21

LCD



Max. capacity: 4 x 100 ml.

Max. speed: 26.480 xg / 16.500 RPM

Max. volume: 480 ml.

Universal by design. With a wide range of rotors for microplates, cryotubes, microtubes, tubes from 100 ml., with options as versatile as con 28 x 15 ml. tubes in a swing out rotor and 32 x 15 ml. conical tubes in an angle fixed rotor, and rotors for high speed 85 ml., 80 ml., 50 ml., 30 ml. and 10 ml. tubes. The accessories and components are designed to facilitate cleaning and quick rotor exchange. This equipment can process highly diverse samples, offering the most exhaustive control of the process in its range. Programming by stages allows the user to control each of them, ensuring traceability and repeatability of the process at all times.

The safety devices incorporated, for the sample as well as the user, impede the cycle from beginning if the operation is not carried out in the right way and according to the values entered.

Features

LCD screen:

- Shows RPM and RCF, time and acceleration/deceleration (PCBS).
- Speed programming in 10 RPM/ 10 xg steps.
- Timer countdown/up from "0" or at "set RPM/ RCF" for reproducible tests.
- Timer from 5 sec. to 99 min. programmable in 5 sec. steps and hold position.
- PCBS: Progressive controlled acceleration and braking system up to 175 selectable ramps that prevents sample homogenization after separation.
- 16 programmable memories.
- Several acoustic and visual messages warning the user the device situation.

Easy to use

- Microprocessor controlled.
- Induction motor maintenance free (brushless).
- Rotors list on memory.
- Noise level: below 60 dB.
- Start, stop, open lid and short spin with adjustable speed buttons.
- Option of free/locked adjustment of RPM/ RCF along the run.
- Automatic open lid, programable.
- Low height for easy access.
- Last values remain in memory.
- Automatic rotor recognition. Over-speed protection.

Safety

- Lid provided with security systems:
 - Automatic lid lock system, motorized with double lock.
 - Emergency lid-lock release.
 - Locking and protection against opening along the run.
 - Lid dropping protection.
 - Port in the lid for calibration and operation checking.
- Unbalance detection and switch off.
- Protection safety ring between the centrifugation chamber and the housing.
- Chamber of centrifugation in stainless steel (easy cleaning).
- Rotors can be removed with the lid closed. Hermetic lids.
- Rotors and adapters autoclavable, easy to install by the user.
- Forced ventilation to reduce temperature increasing.
- Automatic disconnection for energy saving up to 8 h., with deactivation option.

EU Directives: 2011/65/EU, 2012/19/EU, 2014/30/EU, 2014/35/EU, 98/79/EC.

Standards: EN 61010-1, EN 61010-2-101, EN 61010-2-020, EN 61326-2-6, EN 61326-1.

Versions

| | Dimensions (mm)(w x d x h) | | | Net weight (Kg) | Voltage (V) | Frecuency (Hz) | Consumption (W) |
|--------|-------------------------------|-----|-----|--------------------|----------------|-------------------|--------------------|
| CE 110 | 410 | 520 | 320 | 36 | 220-230 | 50-60 | 440 |
| CE 116 | 410 | 520 | 320 | 36 | 110-120 | 50-60 | 420 |

Centrifuges universal: Series Digicen 21

DIGICEN 21R

LCD  



IVD CE

Max. capacity: 4 x 100 ml.

Max. speed: 26.480 xg / 16.500 RPM

Max. volume: 480 ml.

Versatility fused with effectiveness. The centrifuge Digicen 21 R has a wide range of angle fixed rotors, both for low revolutions, with capacity up to 32 tubes of 15 ml./15 ml. conical, and for microtubes, cryotubes and high speed tubes. For the swing out versions, it has rotors for 4 tubes of 100 ml. and up to 28 positions for 15 ml. tubes. The wide range of reducers that accompany each of these rotors give the great versatility that defines the universal centrifuges. Its powerful refrigeration system enables it to maintain the minimum temperature of the chamber below 4°C regardless of the type of rotor and the speed selected.

This particularity, joined to the control of the process of each of the stages and the parameters that control them, gives the user confidence in traceability during the centrifugation cycle.

Features

LCD screen:

- Shows RPM and RCF, time, temperature and acceleration/deceleration (PCBS).
- Speed programming in 10 RPM/ 10 xg steps.
- Timer countdown/up from "0" or at "set RPM/ RCF" for reproducible tests.
- Timer from 5 sec. to 99 min. programmable in 5 sec. steps and hold position.
- PCBS: Progressive controlled acceleration and braking system up to 175 selectable ramps that prevents sample homogenization after separation.
- 16 programmable memories.
- Several acoustic and visual messages warning the user the device situation.

Easy to use

- Microprocessor controlled.
- Induction motor maintenance free (brushless).
- Rotors list on memory.
- Noise level: below 60 dB.
- Start, stop, open lid and short spin with adjustable speed buttons.
- Option of free/locked adjustment of RPM/ RCF along the run.
- Low height for easy access.
- Last values remain in memory.
- Automatic rotor recognition. Over-speed protection.

Safety

- Lid provided with security systems:
 - Automatic lid lock system, motorized with double lock.
 - Emergency lid-lock release.
 - Locking and protection against opening along the run.
 - Lid dropping protection.
 - Port in the lid for calibration and operation checking.
- Unbalance detection and switch off.
- Protection safety ring between the centrifugation chamber and the housing.
- Chamber of centrifugation in stainless steel (easy cleaning).
- Rotors can be removed with the lid closed. Hermetic lids.
- Rotors and adapters autoclavable, easy to install by the user.
- Automatic disconnection for energy saving up to 8 h.

Refrigeration

- Remains the refrigeration after centrifugation process.
- Precooling program with rotor spinning and temperature selectable.
- Guarantee 4°C at maximum RPM.
- Temperature range from -20°C (-4°F) to 40°C (104°F) in 1°C steps.
- Temperature sensor inside the chamber.
- Gas R 449A HFO (CFC free).

EU Directives: 2011/65/EU, 2012/19/EU, 2014/30/EU, 2014/35/EU, 98/79/EC.

Regulation n°: (EC) 1005/2009, (EU) 517/2014.

Standards: EN 61010-1, EN 61010-2-101, EN 61010-2-020, EN 61326-2-6, EN 61326-1.

Versions

| | Dimensions (mm)(w x d x h) | | | Net weight (Kg) | Voltage (V) | Frecuency (Hz) | Consumption (W) | Z max advisable (Hz) |
|--------|-------------------------------|-----|-----|--------------------|----------------|-------------------|--------------------|----------------------------|
| CE 113 | 590 | 620 | 320 | 65 | 220-230 | 50 | 700 | < 0.446 |
| CE 119 | 590 | 620 | 320 | 65 | 110-120 | 60 | 800 | < 0.446 |

Accessories

Centrifuges series Digicen 21

| | MICROTUBES | | | | | | | | | | | | | | |
|-------------------------------|------------------|----------|------------|----------|-------------|----------|------------------|----------|-----------------|----------|-----------------|----------|-----------------|----------|--------|
| | RT 267 | | RT 143 | | RT 138 | | RT 150 | | RT 183 | | RT 151 | | RT 253 | | |
| ROTOR | SWING OUT | | SWING OUT | | SWING OUT | | SWING OUT | | ANGLE FIXED 45° | | ANGLE FIXED 45° | | ANGLE FIXED 45° | | |
| Max. capacity | 28 x 15 ml. | | 4 x 50 ml. | | 4 x 100 ml. | | 6/4/2 microtiter | | 32 x 0,2 ml. | | 24 x 1,5-2 ml. | | 12 x 5 ml | | |
| RPM Max. | 5.000 | | 5.300 | | 5.000 | | 4.000 | | 16.500 | | 16.500 | | 16.500 | | |
| Radius (mm) | 147 | | 145 | | 147 | | 122 (3) | | 55 (3) | | 82 | | 87 | | |
| RCF Max. (xg) | 4.108 | | 4.554 | | 4.109 | | 2.182 | | 16.741 | | 24.959 | | 26.480 | | |
| Min. temp. at max. speed (°C) | -6 | | -7 | | -7 | | -9 | | -6 | | -4 | | -2 | | |
| SAMPLE VOLUME | Dim (mm) approx. | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | |
| | | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. |
| 100 ml. | ø48 x 100 | - | - | - | - | 4 | RE 446 | - | - | - | - | - | - | - | - |
| 85 ml. (hs) / 80 ml. (hs) | ø38 x 112 | - | - | - | - | 4 | RE 380 | - | - | - | - | - | - | - | - |
| 80 ml. | ø44 x 100 | - | - | - | - | 4 | RE 338 | - | - | - | - | - | - | - | - |
| 50 ml. (hs) | ø29 x 108 | - | - | 4 | RE 342 | 4 | RE 341 | - | - | - | - | - | - | - | - |
| 50 ml. | ø34 x 100 | - | - | 4 | RE 445 | 4 | RE 335 | - | - | - | - | - | - | - | - |
| 50 ml. conical | ø29 x 117 | - | - | 4 | RE 342 | 4 | RE 341 | - | - | - | - | - | - | - | - |
| 30 ml. / 30 ml. (hs) | ø25 x 98 | - | - | 4 | RE 333 | 4 | RE 332 | - | - | - | - | - | - | - | - |
| 25 ml. conical | ø29 x 83 | - | - | 4 | RE 596 | 4 | RE 597 | - | - | - | - | - | - | - | - |
| 15 ml. | ø16 x 100 | 28 | - | 4 | RE 329 | 16 | RE 316 | - | - | - | - | - | - | - | - |
| 15 ml. conical | ø17 x 122 | 4 | - | 4 | RE 329 | 4/8 | RE 339/579 | - | - | - | - | - | - | - | - |
| 10 ml. (hs) | ø16 x 80 | 28 | - | 4 | RE 329 | 16 | RE 316 | - | - | - | - | - | - | - | - |
| 10 ml. | ø13 x 100 | 28 | RE 516 | 12 | RE 313 | 20 | RE 320 | - | - | - | - | - | - | - | - |
| 10 ml. blood sample | ø16 x 107 | 28 | - | 4 | RE 329 | 16 | RE 316 | - | - | - | - | - | - | - | - |
| 7/10 ml. blood sample | ø13 x 107 | 28 | RE 516 | 4 | RE 337 | 20 | RE 320 | - | - | - | - | - | - | - | - |
| 5 ml. | ø13 x 75 | 28 | RE 512 | 12 | RE 313 | 20 | RE 320 | - | - | - | - | - | - | - | - |
| 5 ml. conical / screw cup | ø17 x 60/ 68 | - | - | - | - | - | - | - | - | - | - | - | - | 12/6 | - |
| 5 ml. blood sample | ø13 x 82 | 28 | RE 512 | 4 | RE 337 | 20 | RE 320 | - | - | - | - | - | - | - | - |
| Microtubes 1,5-2 ml. | ø11 x 42 | 28 | RE 578 | 12 | RE 463 | 20 | RE 408 | 72 | RE 401 | - | - | 24 | - | 12 | RE 506 |
| Microtubes 0,5-0,6 ml. | ø8 x 30 | 28 | RE 582 | 12 | RE 531 | 20 | RE 519 | 72 | RE 580 | - | - | 24 | RE 305 | 12 | RE 507 |
| Microtubes 0,2-0,4 ml. | ø6 x 45 | 28 | RE 583 | 12 | RE 532 | 20 | RE 473 | 72 | RE 581 | 32 x 0,2 | - | 24 | RE 304 | 12 | RE 508 |
| Microtiter plates | 128x86x15/21/45 | - | - | - | - | - | - | 6/4/2 | - | - | - | - | - | - | - |
| Cell culture | 128x86x22 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | - |

(1) This rotor includes hermetic lids.

(2) Allows different configurations depending of the microplates height.

(3) Medium radius.

(4) Available adapters for cryotubes.

(5) Please check tubes features.

(6) Fitting these tubes the rotor can not be closed with the lid.

| | | HIGH SPEED | | | | | | | | | | | | | |
|-------------------------------|------------------|------------------|------|------------------|--------|------------------|--------|------------------|--------|-------------------|--------|-------------------|--------|-------------------|------------|
| | | RT 110 | | RT 108 | | RT 266 | | RT 121 | | RT 152 | | RT 153 | | RT 154 | |
| ROTOR | | ANGLE FIXED 35 ° | | ANGLE FIXED 35 ° | | ANGLE FIXED 35 ° | | ANGLE FIXED 45 ° | | ANGLE FIXED 30 ° | | ANGLE FIXED 30 ° | | ANGLE FIXED 28 ° | |
| Max. capacity | | 24 x 5 ml. | | 24 x 15 ml. | | 32 x 15 ml. | | 6 x 50 ml. | | 12 x 10ml. Hermet | | 8 x 30 ml. Hermet | | 6 x 50 ml. Hermet | |
| RPM Max. | | 6.500 | | 5.000 | | 4.200 | | 6.000 | | 15.000 | | 13.500 | | 9.000 | |
| Radius (mm) | | 113 | | 132/114 | | 149/130 | | 132 | | 78 | | 92 | | 101 | |
| RCF Max. (xg) | | 5.338 | | 3.689/3.186 | | 2.938/2.563 | | 5.313 | | 19.621 | | 18.746 | | 9.146 | |
| Min. temp. at max. speed (°C) | | -4 | | -6 | | -5 | | -4 | | -5 | | -1 | | -4 | |
| SAMPLE VOLUME | Dim (mm) approx. | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | | ADAPTERS | |
| | | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. | Tubes | Ref. |
| 100 ml. | ø48 x 100 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 85 ml. (hs) / 80 ml. (hs) | ø38 x 112 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 80 ml. | ø44 x 100 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 50 ml. (hs) | ø29 x 108 | - | - | - | - | - | - | 6 | RE 365 | - | - | - | - | 6 | RE 536 |
| 50 ml. | ø34 x 100 | - | - | - | - | - | - | 6 | RE 447 | - | - | - | - | - | - |
| 50 ml. conical | ø29 x 117 | - | - | - | - | - | - | 6 | RE 365 | - | - | - | - | 6 | RE 536 |
| 30 ml. / 30 ml. (hs) | ø25 x 98 | - | - | - | - | - | - | 6 | RE 387 | - | - | 8 | - | 6 | RE 392 |
| 25 ml. conical | ø29 x 83 | - | - | - | - | - | - | 6 | RE 598 | - | - | - | - | 6 | RE 617 |
| 15 ml. | ø16 x 100 | - | - | 24 | - | 32 | - | 6 | RE 361 | - | - | 8 | RE 406 | 6 | RE 394 |
| 15 ml. conical | ø17 x 122 | - | - | 12 | - | 32 | - | 6 | RE 361 | - | - | - | - | 6 | RE 394 (6) |
| 10 ml. (hs) | ø16 x 80 | - | - | 24 | RE 384 | 32 | RE 529 | 6 | RE 361 | 12 | - | 8 | RE 391 | 6 | RE 395 |
| 10 ml. | ø13 x 100 | - | - | 24 | RE 385 | 32 | RE 518 | 18 | RE 360 | - | - | 8 | RE 407 | 6 | RE 396 |
| 10 ml. blood sample | ø16 x 107 | - | - | 24 | - | 32 | - | 6 | RE 361 | - | - | - | - | 6 | RE 394 |
| 7/10 ml. blood sample | ø13 x 107 | - | - | 24 | RE 385 | 32 | RE 518 | 6 | RE 364 | - | - | - | - | 6 | RE 396 |
| 5 ml. | ø13 x 75 | 24 | - | 24 | RE 306 | 32 | RE 517 | 18 | RE 360 | 12 | RE 389 | 8 | RE 390 | 6 | RE 397 |
| 5 ml. conical / screw cup | ø17 x 60/68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5 ml. blood sample | ø13 x 82 | 24 | - | 24 | RE 306 | 32 | RE 517 | 6 | RE 364 | 12 | RE 389 | 8 | RE 390 | 6 | RE 397 |
| Microtubes 1,5-2 ml. | ø11 x 42 | - | - | 24 | RE 601 | 32 | RE 602 | 18 | RE 464 | - | - | - | - | 18 | RE 433 |
| Microtubes 0,5-0,6 ml. | ø8 x 30 | - | - | 24 | RE 603 | 32 | RE 604 | 18 | RE 533 | - | - | - | - | 18 | RE 575 |
| Microtubes 0,2-0,4 ml. | ø6 x 45 | - | - | 24 | RE 605 | 32 | RE 606 | 18 | RE 534 | - | - | - | - | 18 | RE 576 |
| Microtiter plates | 128x86x15/21/45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Cell culture | 128x86x22 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

RT 128: Available rotor for capillaries (includes microhaematocrit reader card).



SPHERA GROUP

SPHERA GROUP s.r.o.

info@sphera-group.cz

Tel: +420 226 886 248

**Průmyslová 7 Business Park
102 00 Praha, Czech Republic**