

Homogenizers

2015-2016 Catalog PRO Scientific

Handheld or Post-Mounted Homogenizer
Digital Benchtop Homogenizer
Programmable Homogenizer
Accessories & Tools
Homogenizing Packages
Automated Homogenizer





1. Handheld or Post-Mounted Homogenizer 3-4

- Bio-Gen PRO200
- PRO250

2. Digital Benchtop Homogenizer 5

- PRO D-Series

3. Programmable Homogenizer 6

- PRO PC-Series

4. Accessories & Tools 7-11

- Multi-Gen Generator Probe
- PRO Deflector Heads
- PRO Safety Seal
- Quick Connect Generator Probe

5. Homogenizing Packages 12-13

6. Automated Homogenizer 14-18

- Multi-Prep Homogenizer
 - Dual Processing Homogenizer
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핸드타입 균질기 (0.03mL~1L)

Bio-Gen™ PRO200®

Handheld or Post-Mounted Laboratory Homogenizer

Offering plenty of power and useful features, the Bio-Gen PRO200 homogenizer now has a 144 watt, high-torque motor with a variable speed adjustment, allowing for homogenization in mere seconds and a maximum noise level of only 68 dB. A separate ON/OFF switch conveniently allows for the slide switch speed control to remain at your ideal homogenizing speed.

With PRO QUICK CONNECT® rotor stator generators, ranging from 5 mm to 20 mm in diameter, or with PRO's SAFETY SEAL® ST (Sealed Tube) Chamber Assemblies, the Bio-Gen PRO200 can homogenize samples as small as 0.03 ml or as large as 1 L.

The Bio-Gen PRO200 is ideal for using our Multi-Gen 7® stainless steel generators (see page 7 in our Laboratory Equipment catalog) for low-cost repeat homogenization without the risk of cross contamination.

Refer to pages 7 to 10 in PRO's Laboratory Equipment catalog for available generators and assemblies.

Specifications

| | |
|----------------------|---|
| Dimensions | 2.15 x 7.875 x 1.98 in / 5.4 x 20.0 x 5.03 cm (w x h x d) |
| Weight | 1.4 lb / 0.6 kg |
| Speed range | 5,000 - 30,000 rpm (115 V) / 5,000 - 30,000 rpm (220 V) |
| Power | 144 W |
| Sample vol | 0.03 ml - 1 L* |
| Noise rating | 68 dB |
| Speed control | Analog; variable speed; separate ON/OFF switch |

**Recommended maximum sample volume*

Item No. Description

| | |
|-----------------|--|
| 01-01200 | Bio-Gen PRO200 Homogenizer - 115 Volts - 5,000 to 30,000 RPM |
| 01-02200 | Bio-Gen PRO200 Homogenizer - 220 Volts - 5,000 to 30,000 RPM |
| 80-20000 | PRO200 Small Footprint Stand Assembly with 1/2" diameter post |

Homogenizing Hint

When homogenizing in 1.5 ml microtubes, 5 mm and 7 mm generators are ideal.

Bio-Gen™ PRO200®

The lightest,
highest-torque,
most versatile
homogenizer
available

GENERATOR
SOLD SEPARATELY

The Bio-Gen PRO200 shown in the
model 80-00200 stand assembly
for hands-free homogenizing

GENERATOR SOLD SEPARATELY



PRO250

576 watts of high-power homogenization in a compact, handheld unit

GENERATOR SOLD SEPARATELY



By adding the SC-250 digital speed control box, the PRO250 can process at lower speeds for even greater precision – speed range 0 - 30,000rpm

핸드타입 균질기 (0.03mL~5L) PRO250®

Handheld or Post-Mounted Laboratory Homogenizer

The PRO250 is a perfect fit between the PRO200 and the benchtop PRO homogenizers. It's lightweight enough to be handheld for convenience, yet has extra torque for processing difficult samples. A separate ON/OFF switch effortlessly allows for the dial knob speed control to remain at your ideal homogenizing speed.

Combining the power of a 3/4 hp, 576 watt motor with a smooth variable speed control, the PRO250 handles a wide range of sample sizes. With PRO QUICK CONNECT® rotor stator generators ranging in diameter from 5 mm to 30 mm, it can process samples from 0.03 ml to 5 L. The PRO250 also accommodates our SAFETY SEAL® ST Chamber Assemblies with either a rotor stator generator or a blade.

Refer to pages 7 to 10 for available generators and assemblies.

Specifications

| | |
|---------------|--|
| Dimensions | 2.75 x 9 x 2.75 in (w x h x d) / 6.9 x 22.8 x 6.9 cm |
| Weight | 3.2 lb / 1.4 kg |
| Speed range | 10,000 - 30,000 rpm |
| Power | 576 W |
| Sample vol | 0.03 ml - 5 L* |
| Noise rating | 72 dB |
| Speed control | Analog; variable speed / digital-ready |

**Recommended maximum sample volume*

Item No. Description

| | |
|------------|---|
| 01-01250 | PRO250 Homogenizer - 115 Volts - 10,000 to 30,000 RPM |
| 01-02250 | PRO250 Homogenizer - 220 Volts - 10,000 to 30,000 RPM |
| 01-01250C | PRO250C Homogenizer - 115 Volts - 10,000 to 30,000 RPM Compatible with external PRO Analog and Digital Speed Control Boxes |
| 01-02250C | PRO250C Homogenizer - 220 Volts - 10,000 to 30,000 RPM Compatible with external PRO Analog and Digital Speed Control Boxes |
| 01-01250AU | PRO250 Homogenizer - 115 Volts - 10,000 to 30,000 RPM carries CSA certification |
| 80-00102 | NEW VESSEL HOLDER ASSEMBLY FOR USE WITH 80-00250, 80-25100 AND PRO BENCHTOP HOMOGENIZERS |
| 80-25000 | PRO250 Small Footprint Stand Assembly with 1/2" diameter post |
| 80-25100 | NEW PRO250 Large "U" Base Stand Assembly with 1/2" diameter post |
| 91-01270 | Digital Speed Control Box for PRO250, 115 Volts |
| 91-02270 | Digital Speed Control Box for PRO250, 220 Volts |
| 91-01250 | Analog Speed Control Box for PRO250, 115 Volts |
| 91-02250 | Analog Speed Control Box for PRO250, 220 Volts |

디지털 탁상용 균질기 (0.03mL~30L) **PRO D-Series®**

Digital Benchtop Homogenizers

The D-Series is a perfect balance of power and superior performance. Combining a high-watt motor and advanced technology in digital speed controls has resulted in the most reliable and durable laboratory benchtop homogenizer. Its Three-Turn Speed Knob with the ability to adjust RPMs to the hundreds opposed to thousands, and its brighter LED display provide more user-friendly control. Additional features, such as the Dual-Power Light Indicator for simpler error/problem identification and the PRO TRAC motorized stand for effortless, accurate and smooth motor positioning, complement the most advanced digital benchtop homogenizer on the market.

The D-Series offers two different models with different power options: 576W and 1305W. With a sample volume range capability from microliters to liters, the D-Series is enormously versatile at homogenizing, emulsifying, blending and/or mixing organic and inorganic materials.

The entire line of PRO QUICK CONNECT® generators can be mounted to the D-Series, which also accepts every PRO SAFETY SEAL® chamber assembly to safely contain generated aerosols and prevent sample and workspace contamination. The D-Series 400DEL is an extra long (EL) stand height version for use with tall containers.

Refer to pages 7 to 10 for available generators and assemblies.

| Specifications | 300D | 400D / 400DEL |
|-----------------|----------------|-----------------|
| Weight | 21 lb / 9.5 kg | 32 lb / 14.5 kg |
| RPM range | 0 - 28,000 | 0 - 23,000 |
| Power watts | 576 | 1305 |
| Sample vol | 0.03 ml - 5 L* | 0.03 ml - 30 L* |
| Noise rating dB | 68 | 68 |

*Recommended maximum sample volume

Item No. Description

| | |
|-------------|--|
| 01-01300DS | PRO300D Digital Homogenizer Variable speed: 0 to 28,000 rpm, 3/4 hp, 115 V, 50/60 Hz, 5.8 A. |
| 01-02300DS | PRO300D Digital Homogenizer Variable speed: 0 to 28,000 rpm, 3/4 hp, 220 V, 50/60 Hz, 2.9 A. |
| 01-01400DS | PRO400D Digital Homogenizer Variable speed: 0 to 23,000 rpm, 1-3/4 hp, 115 V, 50/60 Hz, 10 A. |
| 01-02400DS | PRO400D Digital Homogenizer Variable speed: 0 to 23,000 rpm, 1-3/4 hp, 220 V, 50/60 Hz, 5 A. |
| 01-01400DEL | PRO400DEL Digital Homogenizer With extra long stand height, variable speed: 0 to 23,000 rpm, 1-3/4 hp, 115 V, 50/60 Hz, 10 A. |
| 01-02400DEL | PRO400DEL Digital Homogenizer With extra long stand height, variable speed: 0 to 23,000 rpm, 1-3/4 hp, 220 V, 50/60 Hz, 5 A. |

Homogenizing Hint

For large solid mass or dry homogenization, use a PRO SAFETY SEAL® chamber assembly with a blade.



PRO D-Series
Compact benchtop unit speeds through homogenizing tasks with smooth, digital speed control and plenty of power

GENERATOR SOLD SEPARATELY

The PRO400 speeds through the homogenization of difficult samples. Shown here with the 02-37000 stainless steel deflector head (see page 8) attached to a 37mm generator for enhanced sample motion.



PRO PC-Series

Most versatile and affordable, high-torque, programmable homogenizers available



PRO400PC

CHAMBER ASSEMBLY SOLD SEPARATELY



PROgrammable® Software graphs a homogenization program in real time on your computer screen

PC연동 디지털 탁상용 균질기 PRO PC-Series®

Programmable Laboratory and Industrial Homogenizers

Responding to a need for homogenizers that can run repetitive batch processing with a minimum of operator attention, PRO developed the computer-interfaced PRO PC-Series®.

The PRO300PC and PRO400PC are programmed either from the unit's touchpad or from your own laptop or desktop computer (serial communication modes RS232) with the included PRO-programmable® software. An infinite number of programs can be created and stored, each consisting of up to 23 unique cycles defining speed, run time and pause between each cycle. At any point a PC-Series homogenizer can be overridden and manual control resumed.

PRO PC-Series homogenizers meet industry requirements for verification of processing and documentation maintenance. As homogenization proceeds, data can be graphed on the computer screen. Both the programs and the data collected (set time and set speed versus actual time and actual speed) can be stored and recalled for screen display or printout.

For further specifications refer to the D-Series descriptions on page 5. Refer to pages 7 to 10 for available generators and assemblies.

Specifications

| | 300PC | 400PC / 400PCEL |
|-----------------|----------------|-----------------|
| Weight | 21 lb / 9.5 kg | 32 lb / 14.5 kg |
| RPM range | 0 - 28,000 | 0 - 23,000 |
| Power watts | 576 | 1305 |
| Sample vol | 0.03 ml - 5 L* | 0.03 ml - 30 L* |
| Noise rating dB | 68 | 68 |

*Recommended maximum sample volume

Item No. Description

- 01-01300PC** PRO300PC Programmable Homogenizer Variable speed: 0 to 28,000 rpm, 3/4 hp, 115 V, 50/60 Hz, 5.8 A.
- 01-02300PC** PRO300PC Programmable Homogenizer Variable speed: 0 to 28,000 rpm, 3/4 hp, 220 V, 50/60 Hz, 2.9 A.
- 01-01400PC** PRO400PC Programmable Homogenizer Variable speed: 0 to 23,000 rpm, 1-3/4 hp, 115 V, 50/60 Hz, 10 A.
- 01-02400PC** PRO400PC Programmable Homogenizer Variable speed: 0 to 23,000 rpm, 1-3/4 hp, 220 V, 50/60 Hz, 5 A.
- 01-01400EL/PC** PRO400PCEL Programmable Homogenizer With extra long stand height, variable speed: 0 to 23,000 rpm, 1-3/4 hp, 115 V, 50/60 Hz, 10 A.
- 01-02400EL/PC** PRO400PCEL Programmable Homogenizer With extra long stand height, variable speed: 0 to 23,000 rpm, 1-3/4 hp, 220 V, 50/60 Hz, 5 A.

Multi-Gen®

The better alternative to plastic disposable generator probes

Multi-Gen® generator probes are the better alternative to disposable plastic generator probes. This unique equipment is a reusable 7mm diameter generator probe manufactured from superior 316 stainless steel and PTFE, which allows for homogenizing samples without cross contamination and without the need to stop and clean a generator between samples. A Multi-Gen generator probe can quickly lock into the special Multi-Gen Adapter to provide hands-free ejection of the probe, minimizing the chance of accidental contamination. Multi-Gen generator probes are offered in multi-packs of 12 for convenience.

Advantages over plastic disposable generator probes:

First advantage, Multi-Gen generator probes can process more difficult samples, including tough tissues.

Second advantage, Multi-Gen generator probes can be sterilized by any method, including flaming and autoclaving.

Third advantage, Multi-Gen generator probes are more economical because of their ability to be reused an unlimited number of times not like plastic disposable generator probes

Multi-Gen 7XL Features:

- Open slotted tooth design – ideal for the softest to the toughest of samples
- Longer shaft, approximately 115mm – perfect for sample volumes from microtubes to 50ml tubes

Pro Multi-Gen 7XL COMPONENTS AVAILABLE INDIVIDUALLY

| Item No. | Description |
|---------------|--|
| 07-07200 | Multi-Gen motor unit adapter |
| 02-070MGXL-12 | Multi-Gen 7XL 12-Pack of Generator Probes |
| 80-00218 | Multi-Gen Ejector Clamp Assembly (for use with PRO200 stand p/n 80-00200) |
| 03-11703P | Multi-Gen Replacement Bearing - 6/Package |

Pro Multi-Gen 7XL

Tougher than disposable generators - and more economical



Multi-Gen 7XL generators cover the spectrum of sample volumes.



Multi-Gen 7XL is a package of 12 7mm open-slotted generators

PRO Deflector Heads

Enhance sample movement for improved homogenization

PRO Scientific deflector heads are specifically designed to enhance the homogenization of larger volume and higher viscosity materials.

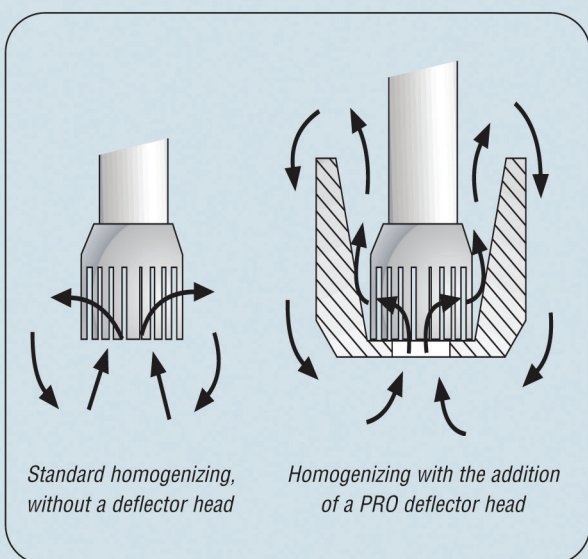
The deflector head design creates vertical movement of heavy materials which would otherwise remain motionless, and promotes increased flow on larger volume samples. When processing viscous materials like creams and lotions, the PRO homogenizer deflector head forces materials from the generator tip up its tapered walls, creating increased vertical movement of the entire sample (see the figure, below left). The material is then repeatedly recycled back down to the bottom of the generator and up through the deflector head until a homogeneous mixture is achieved.

PRO deflector homogenizer heads are available in acetyl resin and stainless steel, and fit easily on PRO generators with diameters of 20 mm or more.



PRO Deflector Heads

Enhance homogenization of larger volume and higher viscosity samples



PRO Deflector Heads

| Item No. | Description |
|-----------|---|
| 02-20000D | Deflector Head for 20mm Generator - Acetal Resin |
| 02-20000S | Deflector Head for 20mm Generator - Stainless Steel |
| 02-30000D | Deflector Head for 30mm Generator - Acetal Resin |
| 02-30000S | Deflector Head for 30mm Generator - Stainless Steel |
| 02-37000D | Deflector Head for 37mm Generator - Acetal Resin |
| 02-37000S | Deflector Head for 37mm Generator - Stainless Steel |
| 02-43000D | Deflector Head for 43mm Generator - Acetal Resin |
| 02-43000S | Deflector Head for 43mm Generator - Stainless Steel |
| 02-59000D | Deflector Head for 59mm Generator - Acetal Resin |
| 02-59000S | Deflector Head for 59mm Generator - Stainless Steel |

Homogenizing Hint

Always begin homogenizing at a low rpm, and then gradually increase the speed to your target level.

PRO Safety Seal®

Tubes and Chamber Assemblies for safely homogenizing volatile materials and protecting samples from contamination

PRO Deflector Heads

| Item No. | Description | Treatable Vol. (ml) |
|----------|-------------------------------------|---------------------|
| ST-2 | 1.5ml/2ml Assembly w/ 5mm Generator | 0.2 - 1.0 |
| ST-5 | 5ml Assembly w/5mm Generator | 0.5 - 3.0 |
| ST-10 | 16ml Assembly w/7mm Generator | 2.0 - 10 |
| ST-15 | 19ml Assembly w/7mm Generator | 5.0 - 11 |
| ST-50-10 | 50ml Assembly w/10mm Generator | 5.0 - 40 |
| ST-50-20 | 50ml Assembly w/20mm Generator | 5.0 - 25 |

PRO Glass Chamber Assemblies

| Item/Description | Treatable Vol. (ml) |
|---|---------------------|
| 473ml Chamber Assembly w/2" Dia. Blade | 50 - 150 |
| 946ml Chamber Assembly w/2" Dia. Blade | 100 - 800 |
| 473ml Chamber Assembly w/20mm Generator | 150 - 300 |
| 473ml Chamber Assembly w/30mm Generator | 150 - 350 |
| 946ml Chamber Assembly w/20mm Generator | 350 - 800 |
| 946ml Chamber Assembly w/30mm Generator | 350 - 800 |

PRO Stainless Steel Chamber Assemblies

| Item/Description | Treatable Vol. (ml) |
|--|---------------------|
| 70ml Chamber Assembly w/1" Dia. Blade | 10 - 60 |
| 600ml Chamber Assembly w/2" Dia. Blade | 100 - 500 |
| 70ml Chamber Assembly w/10mm Generator | 20 - 60 |
| 70ml Chamber Assembly w/20mm Generator | 20 - 60 |
| 600ml Chamber Assembly w/20mm Generator | 250 - 500 |
| 600ml Chamber Assembly w/30mm Generator | 250 - 500 |
| *1.2l Chamber Assembly w/70mm Generator (not sealed) | 100 - 1L |

*No safety seal, splash guard top only

PRO SAFETY SEAL® Tubes and Chamber Assemblies are by far the industry's safest method of homogenizing with either a blade or a rotor stator generator. Their design provides a two-way barrier, protecting the operator from hazardous aerosols generated during processing while isolating the sample from external contaminants. In addition, the unique design of PRO SAFETY SEAL assemblies will not permit the user to operate the homogenizer with the blade exposed: the blade assembly cannot be engaged to the drive motor unless the chamber is attached.



**PRO SAFETY SEAL®
ST SERIES**

**PRO SAFETY SEAL®
GLASS CHAMBER
ASSEMBLIES**

**PRO SAFETY SEAL®
STAINLESS STEEL
CHAMBER ASSEMBLIES**

PRO Chamber and Motor Selection Chart with Replacement Components

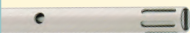






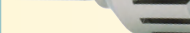

| | Part No. | Sealed Tube/Size | Blade (B)/ Gener. (G) | Shaft Assembly | Tube or Chamber | Cover | Seal or Plug | Gasket | Cage or Adapter | Insert |
|---|-------------|------------------|-----------------------|----------------|-----------------|----------|--------------|----------|-----------------|-------------|
| ST Series | 15-32002 | ST-2 | G | 02-05075 | 11-03010 | 14-01500 | * | N/A | 11-02503 | 14-51017-05 |
| | 15-32005 | ST-5 | G | 02-05075 | 11-03050 | 14-01150 | 14-21051 | N/A | 11-02053 | N/A |
| | 15-32010 | ST-10 | G | 02-07095 | 11-03100 | 14-01150 | 14-21151 | N/A | 11-02103 | N/A |
| | 15-32015 | ST-15 | G | 02-07120 | 11-03150 | 14-01150 | 14-21151 | N/A | 11-02153 | N/A |
| | 15-32050-10 | ST-50 | G | 02-10105 | 11-03500 | 14-01500 | 14-21501-10 | N/A | 11-02503 | N/A |
| | 15-32050-20 | ST-50 | G | 02-20105 | 11-03500 | 14-01500 | 14-21501-20 | N/A | 11-02503 | N/A |
| Glass Chamber Assembly | 15-19473 | 473ml | B2 | 12-00115 | 11-01470 | 14-02600 | 14-12001 | 99-00021 | 14-00002 | 14-00003 |
| | 15-19946 | 946ml | B2 | 12-00150 | 11-01940 | 14-02600 | 14-12001 | 99-00021 | 14-00002 | 14-00003 |
| | 15-12473-20 | 473ml | G | 02-20115 | 11-01470 | 14-01600 | 14-11001 | 99-00021 | 14-00002 | N/A |
| | 15-12473-30 | 473ml | G | 02-30115 | 11-01470 | 14-01600 | 14-11001 | 99-00021 | 14-00002 | N/A |
| | 15-12946-20 | 946ml | G | 02-20150 | 11-01940 | 14-01600 | 14-11001 | 99-00021 | 14-00002 | N/A |
| | 15-12946-30 | 946ml | G | 02-30150 | 11-01940 | 14-01600 | 14-11001 | 99-00021 | 14-00002 | N/A |
| Stainless Steel Chamber Assembly | 15-09070 | 70ml | B1 | 12-00115 | 11-00700 | 14-02700 | 14-02701 | 99-00022 | N/A | N/A |
| | 15-09600 | 600ml | B2 | 12-00150 | 11-00600 | 14-02600 | 14-12601 | 99-00020 | N/A | 14-00003 |
| | 15-02070-10 | 70ml | G | 02-10115 | 11-00700 | 14-01500 | 14-11701 | 99-00022 | N/A | N/A |
| | 15-02070-20 | 70ml | G | 02-20115 | 11-00700 | 14-01500 | 14-11701 | 99-00022 | N/A | N/A |
| | 15-02600-20 | 600ml | G | 02-20150 | 11-00600 | 14-01600 | 14-11601 | 99-00020 | N/A | N/A |
| | 15-02600-30 | 600ml | G | 02-30150 | 11-00600 | 14-01600 | 14-11601 | 99-00020 | N/A | N/A |
| | 15-081200 | 600ml | G | 02-70150 | 11-00120 | 14-33120 | N/A | N/A | N/A | N/A |

B1 = 1 inch dia blade, #04-02001 B2 = 2 inch dia blade, #04-02002 *14-21011-05 Upper Seal and 14-21016-05 Lower Seal

Quick Connect® Generators for every application

Every PRO generator is engineered for multiple applications and long service life. Made from highly durable 316 stainless steel, they can be completely sterilized by hot air, autoclaving, flaming or chemical processes, either as an assembly or disassembled into components. Every PRO generator features PRO's QUICK CONNECT® design to remove or lock a generator in place with an easy quarter-turn. PRO HD generators are designed for rigorous conditions, such as running for an excessive time, processing gritty materials, and when cleaning after each use is not possible. PRO CRYO generators allow users to cryogenically mill soil and sediment samples and to break down frozen materials. Their unique design enables faster, more complete processing of those types of samples than possible with other homogenizing equipment.

For item part numbers refer to page 11.

| | GENERATORS (DIA X LENGTH) | TYPE | COMPATIBLE MODELS | RECOMMENDED TUBE, BEAKER AND CONTAINER SIZES |
|--------------|---|--|--|--|
| 5 mm |  5mm x 75mm | Flat bottom | All models | 0.5ml, 1.5ml, 2.0ml tubes <i>(5mm generator for sample vols. <0.4ml)</i> |
| 7 mm |  7mm x 75mm# 7mm x 95mm 7mm x 120mm*# | Saw tooth Saw tooth Saw tooth | All models All models All models | 1.5ml, 2.0ml, 5.0ml tubes 1.5ml, 2.0ml, 5.0 ml, 10ml tubes 10ml, 15ml tubes |
| 10 mm |  10mm x 105mm# 10mm x 115mm 10mm x 150mm*# | Saw tooth Saw tooth Saw tooth | All models All models All models | 10ml, 50ml tubes 10ml, 15ml, 50ml tubes 15ml tubes |
| 20 mm |  20mm x 105mm# 20mm x 115mm 20mm x 150mm*# 20mm x 200mm* | Saw tooth Saw tooth Saw tooth Saw tooth | All models All models PRO250 and larger models PRO250 and larger models | 50ml tubes, small beakers 50ml tubes, small beakers Small/medium beakers Large beakers and containers |
| 30 mm |  30mm x 115mm# 30mm x 150mm*# 30mm x 200mm* 30mm x 200mm HD* 30mm x 340mm* | Open slotted Open slotted Open slotted Open slotted Open slotted | PRO250 and larger models PRO250 and larger models PRO250 and larger models PRO250 and larger models PRO250 and larger models | Small beakers Small, medium beakers Large beakers and containers Large beakers and containers Large beakers and containers |
| 37 mm |  37mm x 115mm# 37mm x 150mm*# 37mm x 200mm* 37mm x 200mm HD* 37mm x 340mm* | Open slotted Open slotted Open slotted Open slotted Open slotted | PRO350D and larger models PRO350D and larger models PRO350D and larger models PRO350D and larger models PRO400DEL | Small beakers Small, medium beakers Large beakers and containers Large beakers and containers Large containers |
| 43 mm |  43mm x 115mm# 43mm x 150mm*# 43mm x 200mm* 43mm x 200mm HD* 43mm x 340mm* | Open slotted Open slotted Open slotted Open slotted Open slotted | PRO350D and larger models PRO350D and larger models PRO350D and larger models PRO350D and larger models PRO400DEL | Small beakers Small, medium beakers Large beakers and containers Large beakers and containers Large containers |
| 59 mm |  59mm x 115mm# 59mm x 150mm*# 59mm x 200mm* 59mm x 200mm HD* | Open slotted Open slotted Open slotted Open slotted | PRO350D and larger models PRO350D and larger models PRO350D and larger models PRO350D and larger models | Small beakers Small, medium beakers Large beakers and containers Large beakers and containers |
| Cryo |  50mm x 150mm 70mm x 150mm | Cryogenic Cryogenic | PRO250 and larger models PRO250 and larger models | Small, medium beakers Small, medium beakers |

* To ensure proper homogenization, this generator should be used when the sample height in your tube/container comes at least half way up the generator shaft.

Those generator probes aren't stock items, but only available as custom sizes at a higher cost.

PRO Generator Replacement Components

| GENERATOR Part No. | Size (mm) | Tube and Collar | Rotor Head | Rotor Shaft | Rotor Collar | Rotor Knife | Washer | Upper Bearing | Mid Bearing | Lower Bearing |
|--------------------|-----------|-----------------|------------|-------------|--------------|----------------------|----------|---------------|-------------|---------------|
| 02-05075 | 5 x 75 | 70 x 150 | N/A | 05-05075 | 07-00150 | 04-05150 | 99-03302 | 03-10001 | N/A | 03-21002 |
| 02-07075 | 7 x 75 | 08-07075 | N/A | 05-07075 | 07-00150 | 04-07150 | 99-03302 | 03-10001 | N/A | 03-21003 |
| 02-07095 | 7 x 95 | 08-07095 | N/A | 05-07095 | 07-00150 | 04-07150 | 99-03302 | 03-10001 | N/A | 03-21003 |
| 02-07120 | 7 x 120 | 08-07120 | N/A | 05-07120 | 07-00150 | 04-07150 | 99-03302 | 03-10001 | 03-21103 | 03-21003 |
| 02-10105 | 10 x 105 | 08-10105 | N/A | 05-10105 | 07-00150 | 04-10150 | 99-03302 | 03-10001 | N/A | 03-11004 |
| 02-10115 | 10 x 115 | 08-10115 | N/A | 05-10115 | 07-00150 | 04-10150 | 99-03302 | 03-10001 | N/A | 03-11004 |
| 02-10150 | 10 x 150 | 08-10150 | N/A | 05-10150 | 07-00150 | 04-10150 | 99-03302 | 03-10001 | 03-21104 | 03-11004 |
| 02-20105 | 20 x 105 | 08-20105 | N/A | 05-20105 | 07-00150 | 04-20150 | 99-03302 | 03-10001 | N/A | 03-11005 |
| 02-20115 | 20 x 115 | 08-20115 | N/A | 05-20115 | 07-00150 | 04-20150 | 99-03302 | 03-10001 | N/A | 03-11005 |
| 02-20150 | 20 x 150 | 08-20150 | N/A | 05-20150 | 07-00150 | 04-20150 | 99-03302 | 03-10001 | 03-21104 | 03-11005 |
| 02-20200 | 20 x 200 | 08-20200 | N/A | 05-20200 | 07-00150 | 04-20150 | 99-03302 | 03-10001 | 03-21104 | 03-11005 |
| 02-30115 | 30 x 115 | 08-01115 | 16-30150 | 05-20115 | 07-00150 | 04-30150 | 99-03302 | 03-10001 | N/A | 03-11037 |
| 02-30150 | 30 x 150 | 08-01150 | 16-30150 | 05-20150 | 07-00150 | 04-30150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-30200 | 30 x 200 | 08-01200 | 16-30150 | 05-20200 | 07-00150 | 04-30150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-30200HD | 30 x 200 | 08-01200HD | 16-30150 | 05-25200P | 07-00150 | 04-30200 | 99-03302 | 03-10001 | N/A | 03-11250 |
| 02-30340 | 30 x 340 | 08-01340 | 16-30150 | 05-20380 | 07-00150 | 04-37150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-37115 | 37 x 115 | 08-01115 | 16-37150 | 05-20115 | 07-00150 | 04-37150 | 99-03302 | 03-10001 | N/A | 03-11037 |
| 02-37150 | 37 x 150 | 08-01150 | 16-37150 | 05-20150 | 07-00150 | 04-37150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-37200 | 37 x 200 | 08-01200 | 16-37150 | 05-20200 | 07-00150 | 04-37150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-37200HD | 37 x 200 | 08-01200HD | 16-37150 | 05-25200P | 07-00150 | 04-37200 | 99-03302 | 03-10001 | N/A | 03-11250 |
| 02-37340 | 37 x 340 | 08-01340 | 16-37150 | 05-20380 | 07-00150 | 04-37150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-43115 | 43 x 115 | 08-01115 | 16-43150 | 05-20115 | 07-00150 | 04-43150 | 99-03302 | 03-10001 | N/A | 03-11037 |
| 02-43150 | 43 x 150 | 08-01150 | 16-43150 | 05-20150 | 07-00150 | 04-43150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-43200 | 43 x 200 | 08-01200 | 16-43150 | 05-20200 | 07-00150 | 04-43150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-43200HD | 43 x 200 | 08-01200HD | 16-43150 | 05-25200P | 07-00150 | 04-43200 | 99-03302 | 03-10001 | N/A | 03-11250 |
| 02-43340 | 43 x 340 | 08-01340 | 16-43150 | 05-20380 | 07-00150 | 04-43150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-59115 | 59 x 115 | 08-01115 | 16-59150 | 05-20115 | 07-00150 | 04-59150 | 99-03302 | 03-10001 | N/A | 03-11037 |
| 02-59150 | 59 x 150 | 08-01150 | 16-59150 | 05-20150 | 07-00150 | 04-59150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-59200 | 59 x 200 | 08-01200 | 16-59150 | 05-20200 | 07-00150 | 04-59150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-59200HD | 59 x 200 | 08-01200HD | 16-59150 | 05-25200P | 07-00150 | 04-59200 | 99-03302 | 03-10001 | N/A | 03-11250 |
| 02-59340 | 59 x 340 | 08-01340 | 16-59150 | 05-20380 | 07-00150 | 04-59150 | 99-03302 | 03-10001 | 03-21104 | 03-11037 |
| 02-50150 | 50 x 150 | 08-22150 | 16-50150 | 05-22150 | 07-22150 | 04-22001 04-22003 | N/A | 03-00315 | N/A | 03-00315 |
| 02-70150 | 70 x 150 | 08-22150 | 16-70150 | 05-22150 | 07-22150 | 04-22002 04-22003 | N/A | 03-00315 | N/A | 03-00315 |

Ordering PRO Generator Parts with the Generator Part Numbering System

From the list of generators to the left, an ordering part number can be generated by simply taking the prefix 02- followed by the diameter of the shaft and the length of the generator:

02 -X X X X X
Ex: 5mm x 75mm = 02 -05075

If the generator is available with a designation of HD, then simply add an "HD" at the end of the part number:

Ex: 43mm x 200mm HD = 02 -43200HD

Important information for generators with a length greater than 115mm

To ensure proper homogenization and to protect both the generator and sample, generators with a length greater than 115mm should only be used when the sample height in your tube or container comes at least halfway up the generator shaft. Check the generator sizes listed above for the length you are interested in and compare it to the total sample height you will be homogenizing to ensure that your sample height is equal to or greater than half of the generator length.

Available from PRO Scientific is a variety of economical packages which have been preselected to better assist you in choosing a homogenizer setup that best suits your needs. PRO's Micro-Homogenizing Packages are ideal for processing 0.3-2ml volumes, the Max-Homogenizing packages are perfect for processing small-large volumes and the Universal Homogenizing Package provides the utmost in versatility and gives you everything you need to begin homogenizing in tubes from 1.5ml up to 50ml. For multi-sample homogenizing, the Multi-Gen 7 and Multi-Gen 7XL Homogenizing Packages are ideal for homogenizing multi-samples while avoiding cross-contamination in microtubes up to 50ml tubes.



MULTI-GEN 7XL
12 Pack

MICRO PACKAGES

IDEAL FOR
0.5 - 2ml TUBES

STANDARD (PK-02200S)

Bio-Gen PRO200 Homogenizer
5 × 75mm flat bottom PRO quick connect generator

DELUXE (PK-02200D)

Bio-Gen PRO200 Homogenizer
5 × 75mm flat bottom PRO quick connect generator
7 × 95mm saw tooth bottom PRO quick connect generator

PREMIUM (PK-02200P)

Bio-Gen PRO200 Homogenizer
5 × 75mm flat bottom PRO quick connect generator
7 × 95mm saw tooth bottom PRO quick connect generator
Bio-Gen PRO200 stand assembly

MAX PACKAGES

IDEAL FOR
15 - 50ml TUBES

SMALL
MEDIUM
BEAKERS

STANDARD (PK-02200MXS)

Bio-Gen PRO200 Homogenizer
10 × 115mm saw tooth bottom PRO quick connect generator

DELUXE (PK-02250MXD)

PRO250 Homogenizer
10 × 115mm saw tooth bottom PRO quick connect generator
20 × 200mm saw tooth bottom PRO quick connect generator

PREMIUM (PK-02250MXP)

PRO250 Homogenizer
10 × 115mm saw tooth bottom PRO quick connect generator
20 × 200mm saw tooth bottom PRO quick connect generator
PRO250 stand assembly

UNIVERSAL PACKAGES

IDEAL FOR
1.5 - 50ml TUBES

STANDARD (PK-02200UHS)

Bio-Gen PRO200 Homogenizer
7 × 95mm saw tooth bottom PRO quick connect generator
10 × 115mm saw tooth bottom PRO quick connect generator

DELUXE (PK-02200UHD)

Bio-Gen PRO200 Homogenizer
7 × 95mm saw tooth bottom PRO quick connect generator
10 × 55mm saw tooth bottom PRO quick connect generator
Bio-Gen PRO200 stand assembly

MULTI-GEN 7XL PACKAGES

IDEAL FOR MULTI - SAMPLE
HOMOGENIZING 1.5 - 50ml

PREMIUM (PK-02200PMGXL)

Bio-Gen PRO200 homogenizer
Multi-Gen adapter and 12-pack of Multi-Gen 7XL generator probes

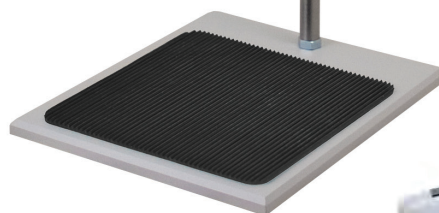
Bio-Gen PRO200

Bio-Gen
PRO200
STAND

PRO250



20-200mm
Saw-Tooth



All packages now come in a convenient protective carrying case.



Micro-Homogenizing Package

| Item No. | Description |
|-----------|--|
| PK-01200S | Standard Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075), and Protective Carrying Case |
| PK-02200S | Standard Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075), and Protective Carrying Case |
| PK-01200D | Deluxe Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075) and 7mm x 95mm saw-tooth generator probe (p/n 02-07095), Includes carrying case |
| PK-02200D | Deluxe Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075) and 7mm x 95mm saw-tooth generator probe (p/n 02-07095), and Protective Carrying Case |
| PK-01200P | Premium Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075), 7mm x 95mm saw-tooth generator probe (p/n 02-07095) and PRO200 stand assy. (p/n 80-20000), and Protective Carrying Case. *Stand assembly boxed separately |
| PK-02200P | Premium Micro-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 5mm x 75mm flat-bottom generator probe (p/n 02-05075), 7mm x 95mm saw-tooth generator probe (p/n 02-07095) and PRO200 stand assy. (p/n 80-20000),and Protective Carrying Case. *Stand assembly boxed separately |

Max-Homogenizing Package

| Item No. | Description |
|-------------|--|
| PK-01200MXS | Standard MaX-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115), and Protective Carrying Case. |
| PK-02200MXS | Standard MaX-Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115), and Protective Carrying Case. |
| PK-01250MXD | Deluxe MaX-Homogenizing Package: Includes PRO250 homogenizer 115v (p/n 01-01250), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115) and 20mm x 200mm saw-tooth generator probe (p/n 02-20200), and Protective Carrying Case. |
| PK-02250MXD | Deluxe MaX-Homogenizing Package: Includes PRO250 homogenizer 220v (p/n 01-02250), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115) and 20mm x 200mm saw-tooth generator probe (p/n 02-20200), and Protective Carrying Case. |
| PK-01250MXP | Premium MaX-Homogenizing Package: Includes PRO250 homogenizer 115v (p/n 01-01250), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115), 20mm x 200mm saw-tooth generator probe (p/n 02-20200), PRO250 stand assembly (p/n 80-25000), and Protective Carrying Case. *Stand assembly boxed separately |
| PK-02250MXP | Premium MaX-Homogenizing Package: Includes PRO250 homogenizer 220v (p/n 01-02250), toolkit, 10mm x 115mm saw-tooth generator probe (p/n 02-10115), 20mm x 200mm saw-tooth generator probe (p/n 02-20200), PRO250 stand assembly (p/n 80-25000), and Protective Carrying Case. *Stand assembly boxed separately |

Universal Homogenizing Package

| Item No. | Description |
|-------------|---|
| PK-01200UHS | Standard Universal Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 7mm x 95mm saw-tooth generator probe (p/n 02-07095) and 10mm x 115mm saw-tooth generator probe (P/N 02-10115), and Protective Carrying Case. |
| PK-02200UHS | Standard Universal Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 7mm x 95mm saw-tooth generator probe (p/n 02-07095) and 10mm x 115mm saw-tooth generator probe (P/N 02-10115), and Protective Carrying Case. |
| PK-01200UHD | Deluxe Universal Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, 7mm x 95mm saw-tooth generator probe (p/n 02-07095) and 10mm x 115mm saw-tooth generator probe (P/N 02-10115), PRO200 stand assy. (p/n 80-20000), and Protective Carrying Case. *Stand assembly boxed separately |
| PK-02200UHD | Deluxe Universal Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-02200), toolkit, 7mm x 95mm saw-tooth generator probe (p/n 02-07075) and 10mm x 115mm saw-tooth generator probe (P/N 02-10115), PRO200 stand assy. (p/n 80-20000), and Protective Carrying Case. *Stand assembly boxed separately |

Multi-Gen 7XL Homogenizing Package

| Item No. | Description |
|---------------|--|
| PK-01200PMGXL | Premium Multi-Gen 7XL Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 115v (p/n 01-01200), toolkit, Multi-Gen adapter (p/n 07-07200) and 12-pack of Multi-Gen 7XL generator probes (p/n 02-070MGXL-12), and Protective Carrying Case. |
| PK-02200PMGXL | Premium Multi-Gen 7XL Homogenizing Package: Includes Bio-Gen PRO200 homogenizer 220v (p/n 01-01200), toolkit, Multi-Gen adapter (p/n 07-07200) and 12-pack of Multi-Gen 7XL generator probes (p/n 02-070MGXL-12), and Protective Carrying Case. |

자동 Multi-Prep 균질기

Multi-Prep Homogenizer

Rapid Multi-Sample Automated Homogenizing System

This Multi-Prep, Rapid Multi-Sample Automated Homogenizing System can process up to 6 samples at once in a quiet, compact, and timesaving unit while providing accurate processing speed during the homogenization cycle.

The Multi-Prep allows for precise homogenizing and repeatability with limited concern of variations in sample size or viscosity. Up to 6 samples can be homogenized at one time in mere seconds giving you the maximum ability to homogenize up to 6 samples per hour. By freeing up a large amount of valuable lab time, homogenizing with the Multi-Prep results in significantly higher laboratory productivity.

With its automated processes, the Multi-Prep can produce more consistent homogenizing results compared to traditional non-automated and standard manual homogenizing methods. Homogenizer protocols vary within any lab and the Multi-Prep's programmability function can store up to 10 different homogenizing programs in memory. For new homogenizing trials or quick-runs, the Multi-Prep can be used in the manual mode for individual sample processing. All processing is contained in a sound-abating enclosure with a rounded clear polycarbonate door for a full view inside. The ergonomically arranged LCD and control panel allows for full viewing of programming parameters.

Each Multi-Prep unit comes equipped with a multi-pack of Multi-Prep Probes, which eliminate cross-contamination as well as the time consuming need to stop and clean a generator between samples. A clean Multi-Prep Probe can be used each time. PRO's Multi-Pack Probes are known as the better alternative to disposable plastic generator probes, because our reusable Multi-Prep Probes are made from 316 Stainless Steel and PTFE. This superior design provides the ability to process more difficult samples, including tough tissues and frozen samples. Their infinitely reusable nature means you can use them again and again. When homogenizing is complete, the Multi-Prep Probes can be sterilized by any cleaning method, including flaming, autoclaving and chemical cleaning. Automation is made easy with the stress-free self-engagement and disengagement of the Multi-Prep Probes.

Another added benefit of the Multi-Prep is that there is no need to alter or change the tube you are continuously using in your research. Whether processing in small tubes or larger centrifuge tubes, the Multi-Prep can accommodate both 15 and 50ml tubes allowing for minimum homogenizing volumes of 2 and 4.5ml respectively. Sample tube integrity is also maintained with our unique removable Spider Tube Rack design that incorporates easy tube replacement. Our superior designed oscillating Spider Tube Rack, mimics the up-down motion of hand-held homogenizing and can perform 60 oscillations per minute for enhanced homogenizing performance.

Specifications

| | |
|-------------|--|
| Dimensions | 10.6 x 14.6 x 14.5 in / 26.9 x 37.1 x 36.8 cm (w x h x d) |
| Weight | 42 lb / 19 kg |
| Speed Range | 2,000 - 18,000 rpm |
| Power | 805 W |
| Sample min. | 2ml with 15ml carrier* / 4.5ml with 50ml carrier* |
| Memory | Program mode: 10 complete running programs can be stored and recalled w/optional oscillating mode* Manual mode w/optional oscillating mode* |

*Oscillating mode will reduce the minimum volume of each tube

Item No. Description

| | |
|-------------|--|
| 01-01620 | 120V Multi-Prep System |
| 01-02620 | 220V Multi-Prep System |
| 62-00150 | 15ml Spider Tube Rack (Can accommodate certain other tube sizes) |
| 62-00500 | 50ml Spider Tube Rack |
| 62-070MP-12 | 12-Pack of 7mm Multi-Prep Probes |
| 62-010MP-12 | 12-Pack of 10mm Saw-Tooth Multi-Prep Probes |

Multi-sample homogenizing made simple.



- Rapidly homogenize 6 samples at the same time
- Samples are homogenized in mere seconds, ensuring accurate homogenizing
- Store up to 10 different homogenizing programs
- Precision Multi-Sample Probes ensure great homogenizing results while avoiding cross contamination
- Automated self-engagement & disengagement of Multi-Sample Probes
- Easy load Spider Tube Rack accommodates 15 or 50ml tubes
- Can perform 60 oscillations per minute to enhance homogenizing breakdown

Multi-Prep Homogenizer

Rapid Multi-Sample Automated Homogenizing System



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The PRO Scientific DPS-20 shown with 3mm ultrasonic probe, 7x115mm homogenizing generator and 20-space carousel rack for 15ml tubes

TIPS, GENERATORS AND RACKS SOLD SEPARATELY

자동균질기+초음파 분산기

DPS-20®

Dual Processing System

The DPS-20 Dual Processing System is a revolutionary product in the sample preparation field. This system combines mechanical and ultrasonic homogenizing methods in a closed, compact, fully automated and timesaving unit.

The three-in-one design of the DPS-20 allows the system to be used in any of the following automated configurations:

- Automated Ultrasonic Homogenizing System
- Automated Mechanical Homogenizing System
- Automated Mechanical and Ultrasonic Homogenizing System

This advanced system allows the maximum in choice and control to best support your processing needs. The DPS-20 merges the advantages of each homogenizing method to make it the optimum timesaving and flexible homogenizing system on the market. Mechanical or ultrasonic homogenizing can be used together or independently of each other. It leads to a faster and more efficient sample breakdown with minimal or no heat introduced, and more precise particle size reduction, all within a noisereducing enclosure. Its automation capability allows for repeat processing and consistent results, freeing up time for other work in the laboratory.

A high-performance brushless motor powers the mechanical homogenizer while the 130-watt ultrasonic processor delivers constant amplitude throughout processing.

The sound-abating enclosure has LED interior lighting and a clear polycarbonate door for full view of the inside.

This system can be used with 15ml, 16ml, 19ml and 50ml tubes through its unique carousel rack design. Additional carousel racks can be purchased for quicker load time.

Up to 20 samples can be processed in one run, or include two rinse positions or setup for every other position to be a rinse position. A typical run time for 20 samples is under 10 minutes.

Onboard computing lets the DPS-20 store up to 10 different homogenizing programs in memory, or it can be used in the manual mode for individual sample processing.

Performance

- **Ultrasonic Homogenizer**
130 watts | Accepts 3mm and 6mm tips
- **Mechanical Homogenizer**
Brushless motor | 2,000 to 16,000rpm | Accepts 7x115mm and 10x115mm generators
- **Interchangeable 20-Place Carousel Racks**
For small tubes and/or large tubes

Technology

- **Modes:** Fully Automated (programmable) or Manual
- **Up to 10 programs** easily stored and recalled
- **Able to program multiple functions:**
Process times, up to 99.99 hours | Amplitudes (ultrasonic) and rpms (mechanical) | Probe/generator depths | Spin-off heights | Sample quantities | Rinse positions (0, 2 or 10 positions)

- Automated stand
- Automated indexing rack in both programmable and manual modes

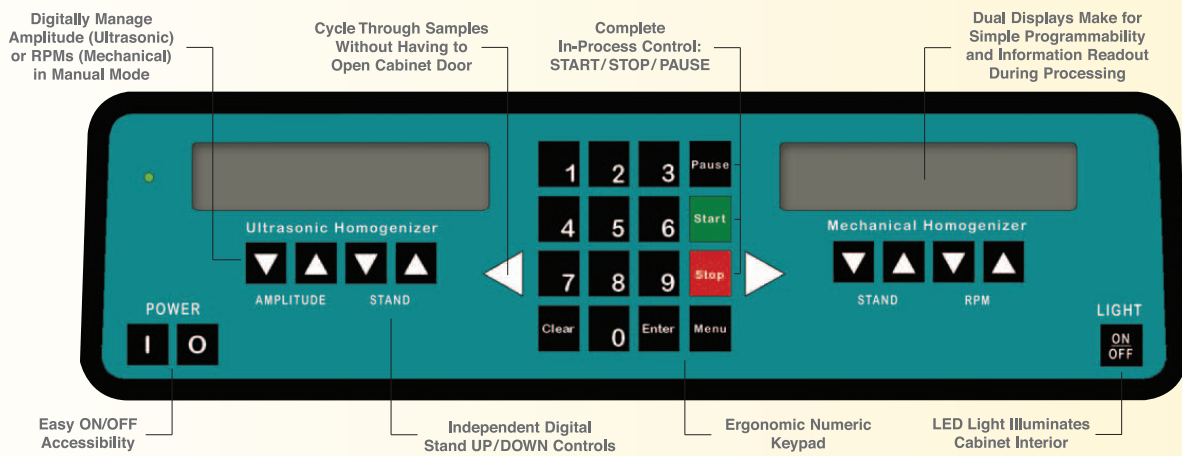
Instrument Design

- Hinged, clear polycarbonate door
- Sound-abating enclosure
- LED interior case lighting
- Removable drip tray for easy cleaning

Specifications

- Tube Size (ml): 15 and 50 conical | 16 and 19 round bottom
- Noise (dB): 64
- Electrical: 120VAC, 50/60Hz | 220VAC, 50/60Hz
- Power (W): 1200
- Dimensions (in): 12.75 x 29.5 x 18.25 (wxhxd)
- Weight (lbs): 85

System Control Panel



Systems | Packages | Accessories | Additional Tubes

When ordering a DPS-20, select both a **SYSTEM** and a **PACKAGE** from the list below. Accessories and additional tubes not included.

DPS-20 Systems

| Item No. | Description |
|------------|--|
| 01-01720 | DPS-20 Dual Processing System, 120 Volts, 50/60 Hz Automated Mechanical and Ultrasonic Homogenizing System** |
| 01-02720 | DPS-20 Dual Processing System, 220 Volts, 50/60 Hz Automated Mechanical and Ultrasonic Homogenizing System** |
| 01-01720.1 | DPS-20 Dual Processing System, 120 Volts, 50/60 Hz System** (ULTRASONIC HAS BEEN REMOVED) |
| 01-02720.1 | DPS-20 Dual Processing System, 220 Volts, 50/60 Hz System** (ULTRASONIC HAS BEEN REMOVED) |
| 01-01720.2 | DPS-20 Dual Processing System, 120 Volts, 50/60 Hz System** (MECHANICAL HAS BEEN REMOVED) |
| 01-02720.2 | DPS-20 Dual Processing System, 220 Volts, 50/60 Hz System** (MECHANICAL HAS BEEN REMOVED) |

Packages

| Item No. | Description |
|---------------|---|
| 72-TR015-015C | 20 Place Micro Tube Cooling Carousel Rack w/3mm Ultrasonic Tip, 5mm x 75mm Flat Bottom Generator Probe and 1.5ml Micro Tubes (qty. 40 tubes, 1.5ml) |
| 72-TR15-15C | 20 Place Small Tube Cooling Carousel Rack w/3mm Ultrasonic Tip, 7 x 115mm Saw Tooth Generator Probe and 15ml Conical Tubes (qty. 40 tubes, 17 x 120mm tubes) |
| 72-TR15-16R | 20 Place Small Tube Cooling Carousel Rack w/3mm Ultrasonic Tip, 7mm x 115mm Saw Tooth Generator Probe and 16ml Round Bottom Tubes (qty. 40 tubes, 17 x 120mm tubes) |
| 72-TR15-19R | 20 Place Small Tube Cooling Carousel Rack w/3mm Ultrasonic Tip, 7mm x 115mm Saw Tooth Generator Probe and 19ml Round Bottom Tubes (qty. 40 tubes, 16 x 125mm tubes) |
| 72-TR50-50C | 20 Place Large Tube Cooling Carousel Rack w/6mm Ultrasonic Tip, 10mm x 115mm Saw Tooth Generator Probe and 50ml Conical Tubes (qty. 40 tubes, 29 x 115mm tubes) |
| 72-TR50-50CF | 20 Place Large Tube Cooling Carousel Rack w/6mm Ultrasonic Tip, 10mm x 115mm Saw Tooth Generator Probe and 50ml Free Standing Conical Tubes (qty. 40 tubes, 29 x 115mm tubes) |
| 72-TR52-50C | 20 Place Large Tube Cooling Carousel Rack w/6mm Ultrasonic Tip, 20mm x 115mm Saw Tooth Generator Probe and 50ml Conical Tubes (qty. 40 tubes, 29 x 115mm tubes) |
| 72-TR52-50CF | 20 Place Large Tube Cooling Carousel Rack w/6mm Ultrasonic Tip, 20mm x 115mm Saw Tooth Generator Probe and 50ml Free Standing Conical Tubes (qty. 40 tubes, 29 x 115mm tubes) |

Accessories

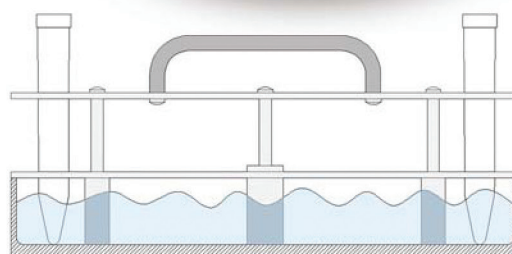
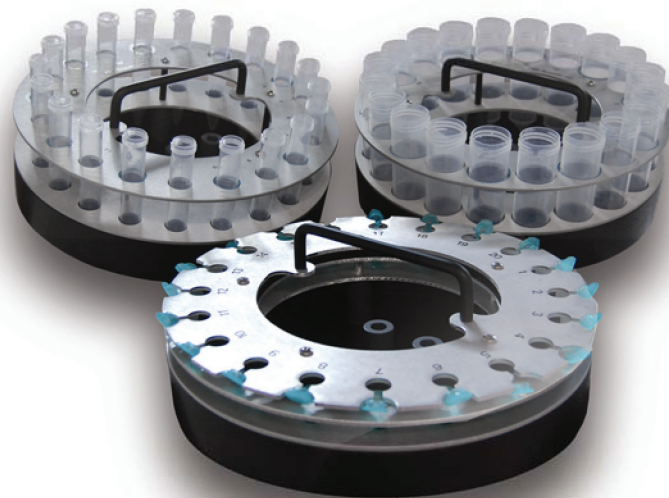
| Item No. | Description |
|------------|---|
| 72-00015 | Cooling Carousel Rack for Micro Tubes: Accommodates 20 Tubes: 1.5ml or 2.0ml |
| 72-00150 | Cooling Carousel Rack for Small Tubes: Accommodates 20 Tubes: 15ml Conical 17 x 120mm, 16ml Round Bottom 17 x 120mm, 19ml Round Bottom 16 x 125mm |
| 72-00500 | Cooling Carousel Rack for Large Tubes: Accommodates 20 Tubes: 50ml Conicals 29 x 115mm, 50ml Free Standing Conicals 29 x 115mm |
| 72-00422 | 3mm Ultrasonic Tip (for use in Carousel Rack for Small Tubes) |
| 72-00435 | 6mm Ultrasonic Tip (for use in Carousel Rack for Large Tubes) |
| 72-05075 | 5mm x 75mm Flat Bottom Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Micro Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |
| 72-07115 | 7mm x 115mm Saw Tooth Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Small Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |
| 72-07120ET | Special modified generator probe: 7mm x 120mm Extended Blade Saw Tooth Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Small Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |
| 72-10115 | 10mm x 115mm Saw Tooth Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Large Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |
| 72-20115 | 20mm x 115mm Saw Tooth Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Large Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |
| 72-10115T5 | Special modified generator probe: 10mm x 115mm Saw Tooth Generator Probe, 316 Stainless Steel (for use in Carousel Rack for Small Tubes) FOR USE IN DPS-20 HOMOGENIZING SYSTEM ONLY |

Tube Carousel Packages

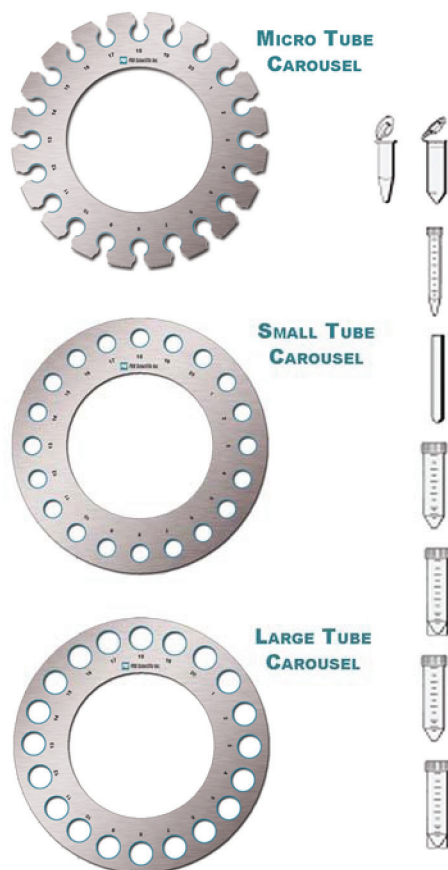
Tube Carousel Packages include everything you need to begin homogenizing with your DPS-20 System. Included in each Carousel Package is one ultrasonic probe, one mechanical homogenizer generator, one carousel tray and a package of forty tubes.

All DPS-20 Carousels now include a high impact, ABS tray design that the end-user can leave empty or easily fill with an ice bath or cooled bath beads. This means that:

- End-users can now safely use the DPS-20 as solely an automated Ultrasonic Multi-Sample Homogenizing System (turning off the mechanical motor units) and have no worry of denaturing their sample.
- End-users with samples that must remain below ambient temperature can now have their samples be Ultrasonically and/or Mechanically homogenized with no worries.
- Even when the carousel tray is filled, tubes are clearly visible for generator/probe placement during setup.
- Not filling the tray with ice or cooled bath beads will not affect the placement of the tubes, and the carousel can be run in this “non-cooling” mode.



CROSS SECTION OF A DPS-20 CAROUSEL WITH AN ICE BATH



| TUBE SIZE (VOLUME) | TUBE DIMENSIONS | ULTRASONIC PROBE SIZE | MECHANICAL GENERATOR SIZE | CAROUSEL PACKAGE PART NUMBER |
|-------------------------------|-----------------|-----------------------|---------------------------|------------------------------|
| 1.5/2.0 ML (MICROTUBE) | 11 x 38 MM | 3 MM | 5 x 75 MM | 72-TRC015-015C |
| 15 ML (CONICAL) | 17 x 120 MM | 3 MM | 7 x 115 MM | 72-TRC15-15C |
| 16 ML (ROUND BOTTOM) | 17 x 120 MM | 3 MM | 7 x 115 MM | 72-TRC15-16R |
| 50 ML (CONICAL) | 29 x 115 MM | 6 MM | 10 x 115 MM | 72-TRC50-50C |
| 50 ML (CONICAL FREE STANDING) | 29 x 115 MM | 6 MM | 10 x 115 MM | 72-TRC50-50CF |
| 50 ML (CONICAL) | 29 x 115 MM | 6 MM | 20 x 115 MM | 72-TRC52-50C |
| 50 ML (CONICAL FREE STANDING) | 29 x 115 MM | 6 MM | 20 x 115 MM | 72-TRC52-50CF |

CUSTOM TUBE CAROUSELS MAY BE AVAILABLE UPON REQUEST

Fiocchetti Refrigerator & Freezer
SCIENTIFIC REFRIGERATORS
 Origin : Italy



MM Incubator
MMM Group
 Origin : Germany



TOMY Autoclaves
 Origin : Japan



iUL Microbiology Lab Automation
 Origin : Spain



Grant Scientific instruments
SCIENTIFIC
 Origin : U.K



Grant bio BIO instruments
 Origin : U.K





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