



TS-100C Pro

A familiar platform.
A new level of workflow control

**Built on reliability.
Designed for repeatability.**

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Brief Company Information

RI SCIENTIFIC |  **biosan**

SIA Biosan · Riga, Latvia

WHO WE ARE

- European manufacturer since 1992; Since 2026, part of Royston Instruments Group
- ISO 9001, ISO 13485, ISO 14001 certified
- CE marked - LVD and EMC complete
- TS platform in the field since October 2006
- Worldwide distributor network; Grant Instruments carries the UK and key markets
- 2+1 year warranty on TS-100C Pro
- Service, spares and blocks continue for the installed TS-100C base

20 years

In the field

Over 40 000

TS product group instruments with blocks shipped

84

Countries shipped to

0% → 40% → 65%

Cooling share of TS product overall volume

Only heating 2006-2008, 40% up to 2022, 65% since 2023. The base moved to cooling – the segment TS-100C Pro upgrades.

THE TS GROUP AFTER LAUNCH

TS-100

Entry – heating only

Remains

TS-100C Pro

Premium – heating, cooling, touchscreen, 2500 rpm, programmable, heated lid

NEW

TS-100C

Classic platform

Private-label / OEM only

TS-100C Smart

Replaced directly by TS-100C Pro

Discontinued



20×20

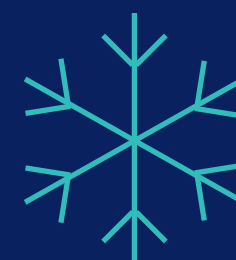
**Programmes
× steps**

2500
rpm

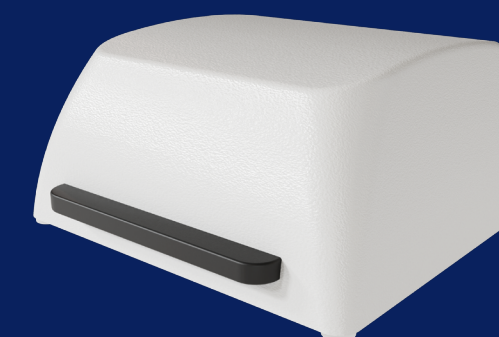
**Maximum
mixing speed**



3.5" colour display



**Freon-free
cooling**



**Heated
lid**



**Automatic
run records**



**User
profiles**



**ISO 9001
ISO 13485**

1 rpm
**Speed
increment**



2 mm
**Orbit
diameter**



USB-C



±0.1°C
**Temperature
stability**



168 h
**Maximum
run time**



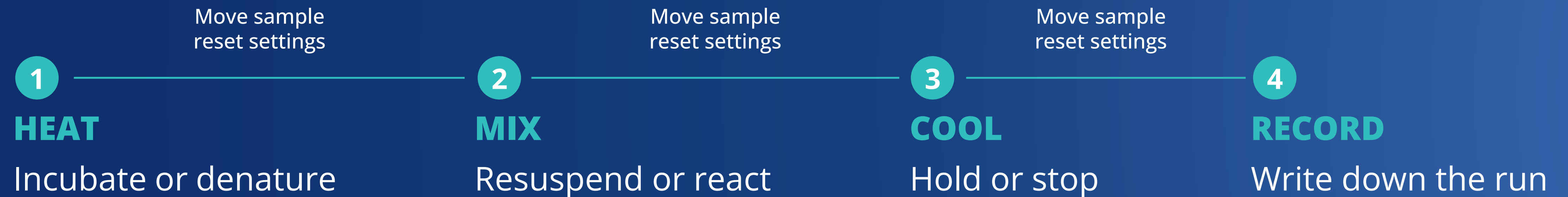
5.2 kg



13 thermoblocks

Sample preparation across several devices

A routine sequence can require repeated transfers, new settings and separate records.



Quick poll: where does your team or customers lose the most consistency?

Repeated setup

Moving samples

Different users

Finding the right block

The TS platform and the Pro generation

20 years in
laboratories

TS-100C Pro keeps the compact format familiar to existing users and adds a more controlled way to build and repeat a method.

- Multi-step programs created on the touchscreen
- Automatic block recognition with block-specific limits
- Profiles, access levels and timestamped records
- Optional heated lid for compatible formats



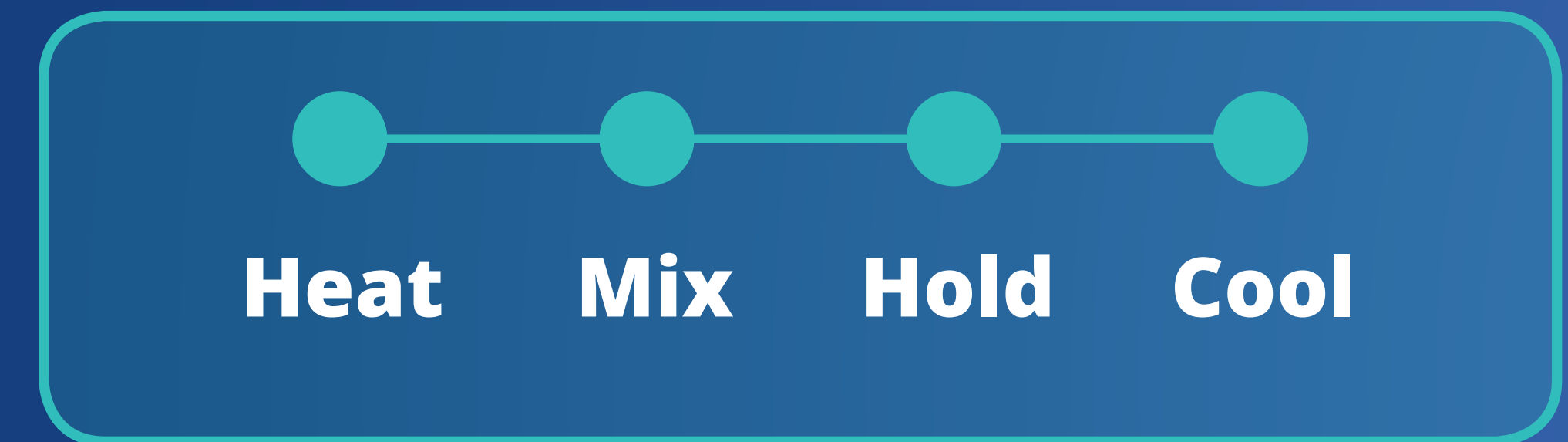
One programmed sample-preparation sequence

Typical bench



The operator resets parameters and moves the samples at each stage.

TS-100C Pro



The operator sets the method once. The instrument manages each programmed transition and records the run.

Fewer manual hand-offs during a temperature-controlled mixing sequence

Key Benefits: what's new?

Touchscreen interface

Touchscreen controls that easily adapt to your needs.

Quick program setup: profiling available directly on-screen; easily save or access pre-set and user-defined programs.

The same system of **set and actual parameters**, all visible and accessible at a glance.

Features such as quick mix, heated lid, user levels, and programming options have been integrated into the device.



Applications where Thermo-shaker can be used

Higher RPM supports demanding workflows such as bead resuspension, NGS library preparation, protein extraction, and analytical sample preparation.

Customer segment	Typical workflow
Molecular biology and genomic labs	DNA/RNA extraction, lysis, cleanup, precipitation, hybridization, gene expression
NGS and genetic testing labs	Library preparation, adapter ligation setup, tagmentation support, bead cleanup, target capture, cDNA library preparation
Proteomics and protein research labs	Protein extraction, denaturation, reduction, alkylation, digestion, peptide cleanup, MS sample preparation
Microbiology and enzymology labs	Enzyme reactions, biomass processing, microbial lysis, protein expression, sample preparation, digestion reactions
Assay development, biotech/pharma and diagnostic research labs	Tube, strip and PCR-plate assay preparation, particle/bead-based detection, labelling reactions
Food, agriculture, QC and analytical testing labs	Metabolite extraction, plant material extraction, small-molecule extraction, sample preparation before LC-MS or chemical analysis



Published protocol demand

NGS library preparation

Reported mixing demand: 1,600–1,800 rpm for short reagent-mixing, bead-resuspension, washing and elution steps.

Reference

Hulstaert et al., STAR Protocols 2, 100475 (2021)

Genomic DNA extraction

External kit protocols demonstrate a need for controlled thermal lysis with agitation before purification.

Reference

NEB Monarch genomic DNA purification protocol

Before transfer, confirm the exact vessel, fill volume, block, lid and speed requirement.

Key Benefits: What's new?



Programmable standalone device
offering multiple features for everyday users.

Easy block exchange

Easy block exchange lets you minimise the instrument setup – no more manual cables or external tools.

Automatic block recognition restricts the maximum speed based on the type of block. Selected legacy **TS-100C blocks*** remain **usable** with block-dependent limitations.

** Final compatibility and RPM limits are defined in the compatibility table.*



New naming strategy



TSP-96/PCR
Non-skirted and semi-skirted PCR plates, 0.2 ml strips and tubes



TSP-20/0.5+12/1.5
Both 0.5 ml and 1.5 ml tubes



TSP-20/0.2+12/1.5
Both 0.2 ml and 1.5 ml tubes



TSP-32/0.5
0.5 ml tubes



TSP-24/1.5
1.5 ml tubes



TSP-24/2.0
2.0 ml tubes



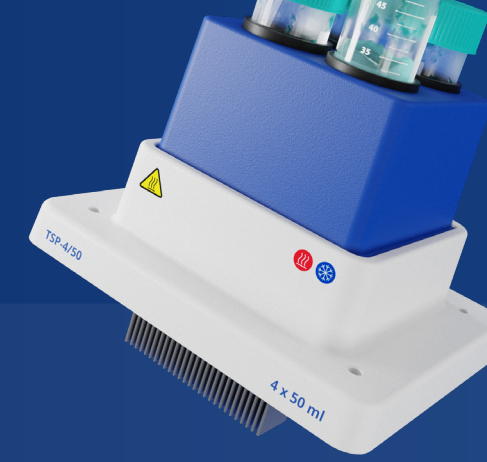
TSP-20/CV10
Cuvettes



TSP-8/5
Conical tubes 5 ml



TSP-8/15
Conical tubes 15 ml



TSP-4/50
Conical tubes 50 ml



TSP-24/CRYO1.8
1–1.8 ml cryotubes



TSP-24/CRYO4
3.6–4.5 ml cryotubes



TSP-20/RB12
Ø12 mm round bottom tubes



Block compatible with Heated lid

Heated-lid compatibility

Block

TSP-20/0.5+12/1.5

TSP-20/0.2+12/1.5

TSP-32/0.5

TSP-24/1.5

TSP-24/2.0

TSP-20/CV10

TSP-96/PCR

Compatible vessel format

20 × 0.5 ml and 12 × 1.5 ml microtubes

20 × 0.2 ml and 12 × 1.5 ml microtubes

32 × 0.5 ml microtubes

24 × 1.5 ml microtubes

24 × 2.0 ml microtubes

20 × 10 mm cuvettes

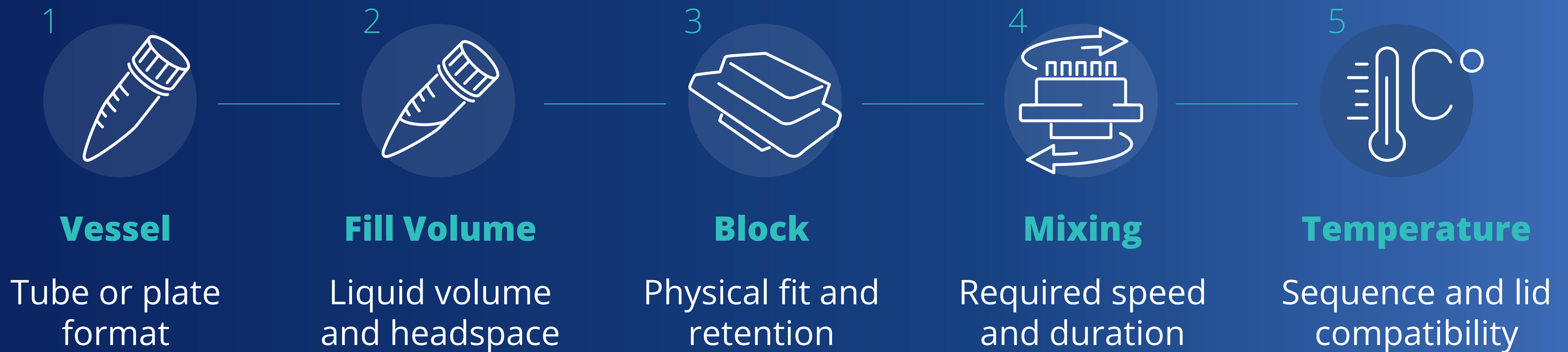
96-well PCR plate, strips or individual 0.2 ml tubes

**The heated lid helps minimise condensation in compatible formats.
Sample temperature depends on the complete setup.**



Selecting the right configuration

Start with the consumable and the method conditions, then select the block.



Displayed temperature relates to the block.
Actual sample temperature depends on the vessel, volume, fill level and protocol conditions.

Specifications – detailed

Technical performance

	TS-100C Pro Thermo-shaker
Temperature setting range	+4 °C to +100 °C
Control range	15 °C below ambient to +100 °C
Temperature stability at 37 °C	±0.1 °C
Temperature accuracy at 37 °C	±0.5 °C
Heating rate +25→+100°C	8.3 °C/min
Cooling rate +25→+4°C	2.3 °C/min
Mixing speed range*	250–2500 rpm
Mixing orbit	2 mm
Time setting / max. operation	1 min – 168 h; continuous
Display	3.5" TFT colour touchscreen
Dimensions	220×240×150 mm
Weight	5.2 kg
Accessories	Heated lid, screws for mounting thermoblock, 13 thermoblock options

Programmability & user management

	TS-100C Pro Thermo-shaker
Programmes	20
Steps per programme	20
Temperature transition rates	3 rates
Speed transition rates	3 rates
Individual user profiles	Up to 5
User access levels	Guest / Operator / Administrator
User-specific programme storage	Yes
Data logging	On device
Connectivity	USB
Quick mix	Yes
Screen lock	Yes

** Block dependent. Maximum speed 1400 rpm with legacy TS-100C blocks
Temperature specs measured in the block without tubes*

Dedicated and legacy blocks

Check	Dedicated TSP block	Selected legacy TS-100C block
Recognition	Recognised automatically	Recognised automatically
Maximum speed	Block-specific limit; up to 2,500 rpm where specified	Maximum 1,400 rpm
Heated lid	Only for the seven listed compatible TSP blocks	Check the current compatibility guide
Protocol transfer	Confirm vessel, fill volume and method conditions	Reconfirm fit, speed requirement and retention
Ordering	Use the current TSP catalogue code	Confirm the exact legacy block code before ordering

**Compatibility should be confirmed from the exact block code.
Similar dimensions do not establish compatibility.**

Software controls and record types

On-device programming

Create, save and run multi-step programs directly from the touchscreen

Quick Mix

Run a short mixing cycle using selected parameters

User controls

Five profiles, guest/operator/administrator access and screen lock

Run information

Timestamped run history and user identification

Service information

Event, calibration, operating-hour and maintenance records

Export

Compatible log files can be exported through USB-C



Customer FAQ and claim boundaries

Customer question

Customer-safe answer

Can I use existing TS-100C blocks?

Selected legacy blocks remain compatible. The instrument recognises them and limits speed to a maximum of 1,400 rpm.

Does the heated lid fit every block?

No. It is compatible with the seven TSP blocks listed in the current guide.

Do I need PC software?

No. Programming, running, logging and user management are available on the touchscreen.

Is the instrument GLP compliant?

It supports timestamped records and user identification. Complete process compliance depends on the laboratory's SOPs.

Does it connect automatically to a LIMS?

No. Compatible logs can be exported through USB-C for use on a PC.

Can it validate cryovial thawing or cell recovery?

The instrument supports cryotube blocks, but biological suitability and specific sample-temperature behaviour have not been validated.

For protocol-specific claims, record the vessel, fill volume, block, lid, speed and duration.

Your protocol and next step

Bring us your protocol

We will help check the vessel format, block, temperature sequence and required mixing conditions.

Customer Service
sales@biosan.lv

Technical Support
support@biosan.lv

Resources

TS-100C Pro product page

Thermoblock selection guide

TS-100C Pro brochure



 www.biosan.lv

Live instrument walk-through

- 1 Install a block and see automatic recognition
- 2 Select or create a short multi-step program
- 3 Start the sequence or use Quick Mix
- 4 View the resulting run record

Representative tube setup

Instrument walk-through. Settings must match the exact block and vessels shown.



Thank you for joining us!

The presentation and webinar recording
will be sent to you by email shortly.

