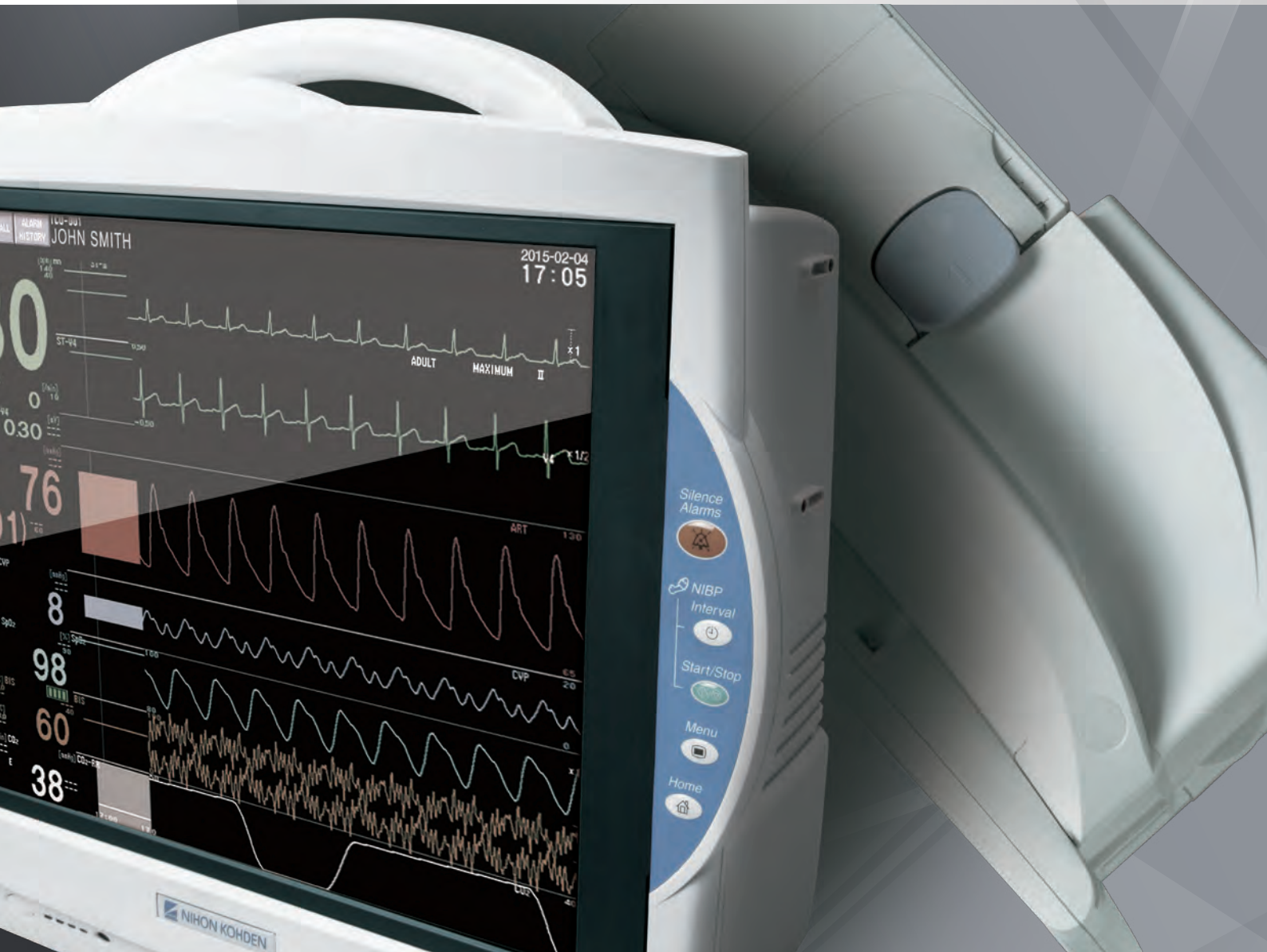


Life Scope *TR*

Bedside Monitors BSM-6000 series



Fighting Disease with Electronics

 **NIHON KOHDEN**



One st

Life Scope TR

Every patient deserves a high level of medical care.

All the Life Scope TR series monitors have many valuable features as standard functions. The larger monitors as well as the smaller monitors all have the same useful capabilities. This supports you in providing the best medical care for all patients all the time.

Smart transport

With today's high acuity patients it is important to maintain a high standard of monitoring care even during transport. With the combination of Life Scope TR and Life Scope PT, Nihon Kohden's transport monitor enables continuous monitoring. All patient information before and during transport is stored in the transport monitor and transferred to the central monitor.

Valuable features without additional cost

All Life Scope TR monitors include a lot of valuable software at no additional cost. The software is the same on all Life Scope TR models. This enables you to provide high medical care anytime anywhere.

Solutions for a better outcome

With unique parameters and sensor technologies as well as the innovative trend graph, Life Scope TR contributes to efficient patient care.



BSM-6701
15-inch LCD



BSM-6501
12.1-inch LCD

andard



BSM-6301
10.4-inch LCD



BSM-6000 series
+
BSM-1700 series

Smart t

With today's high acuity patients it is important to maintain a high standard of monitoring and care even during transport. The combination of Nihon Kohden's Life Scope TR bedside monitor and Life Scope PT transport monitor enables continuous monitoring. All patient information before and during transport is stored in the transport monitor and transferred to the central monitor.



Smart patient transport

To transport the patient, just remove the transport monitor, Life Scope PT, from Life Scope TR with one action.

3 MULTI connectors allow monitoring of advanced parameters such as BIS, IBP, CO, dual SpO₂ and CO₂ in addition to basic parameters of ECG/Resp, SpO₂, dual temperature and NIBP. For example, dual IBP plus CO₂ can be measured on the three MULTI connectors. Life Scope PT saves 24 hours of trend data and alarm history as well as 24 hours of 5 full disclosure waveforms during transport.

transport



Waveform data from the transport monitor



Full disclosure screen on the central monitor

Smart data transport

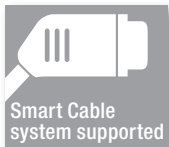
After connecting the transport monitor to another monitor in the network, the data in the transport monitor is automatically uploaded to the central monitor. The patient information, including trend and waveforms, is transferred to the bedside monitor and central monitor to create one seamless patient record. NK's networking technology enables seamless monitoring across different central monitors. You can see continuous past data even from a different central monitor at a different site.



Valuable feature addition

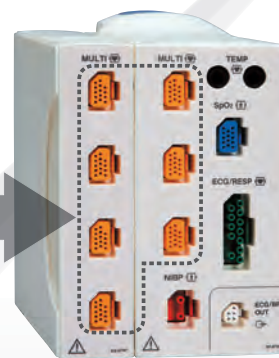
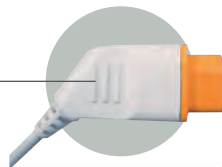
Until now, adding parameters and other valuable features has required expensive optional modules and software. The Life Scope TR monitors include valuable software at no additional cost.

Smart Cable system – new modular technology



When you plug a Smart Cable into a MULTI socket, it automatically detects the parameter and starts measuring. The combination of fixed basic parameters and flexible MULTI socket parameters allows flexible monitoring for different patient conditions. You get complete modular flexibility at a significantly reduced cost and without the inconvenience associated with traditional modular systems.

- IBP
- CO₂
- BIS
- Second SpO₂
- CO
- TEMP
- NMT



MULTI connector

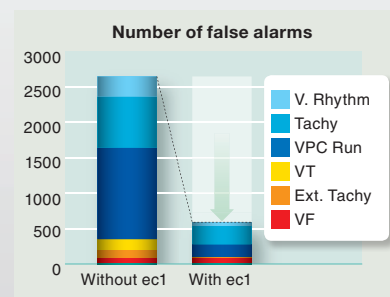
*Measurable parameters depend on the composition.

High quality monitoring increases accuracy

High accurate ec1 arrhythmia analysis

If there are too many false alarms, you may miss noticing when a patient's condition becomes critical.

Nihon Kohden's ec1 arrhythmia analysis provides superior elimination of false alarms. ec1 has been evaluated against public arrhythmia databases as well as Nihon Kohden's own ECG database, with a result of 80% reduction of false alarms.



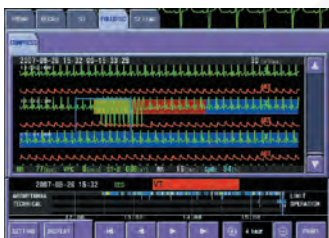
ures without nal cost



Smart data review

Life Scope TR provides storage and review capabilities within the bedside monitor that are typically found only in a central station. Moreover review screens can be synchronized with each other. This enables you to easily access any necessary information.

Full disclosure waveforms



Up to 72 hours of 5 selected waveforms.*

*When transport function is on, up to 24 hours of review data can be saved.

Arrhythmia recall



Over 8,000 arrhythmia events. Multi-template arrhythmia analysis provides more reliable arrhythmia information.

ST review



Multi-lead ST segment monitoring provides you with continuous oversight of transient changes in your patients' cardiac condition.

12-lead ECG analysis



Life Scope TR includes ECAPS 12C, the same 12-lead ECG interpretation software in Nihon Kohden electrocardiographs.

Brain seizure identification

Because of the brain of a newborn baby is immature, it is difficult to detect seizures by observation.

aEEG (amplitude-integrated EEG)



Life Scope TR provides aEEG (amplitude-integrated EEG) which makes it easier to detect brain seizures.

aEEG monitoring is also becoming important in hypothermia therapy for neonatal encephalopathy.

*aEEG is not available on BSM-6301.

Solutions for a better outcome

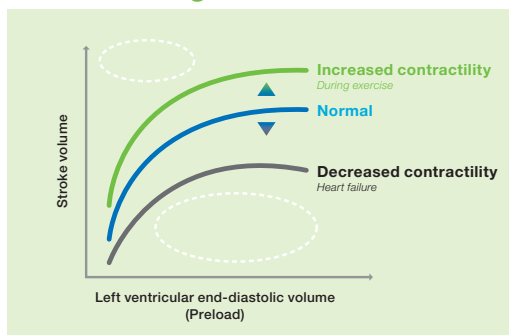
Fluid optimization

Optimizing fluid administration during and post operation can lead to benefits such as shorter length of stay and fewer complications.

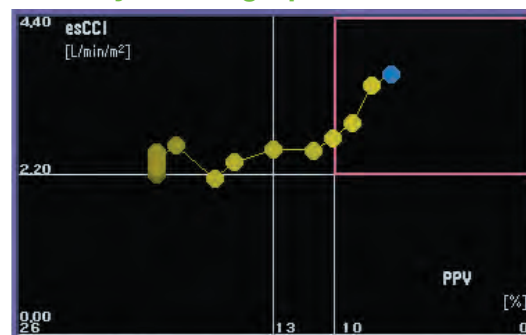
Visualizing volumetric information

Nihon Kohden's hemodynamics graph provides a more intuitive approach to diagnostic and therapeutic decision making in hemodynamic management. This new tool provides a visual Frank-Starling curve to help the clinician easily see the direction and trend of hemodynamic changes.

Frank-Starling curve

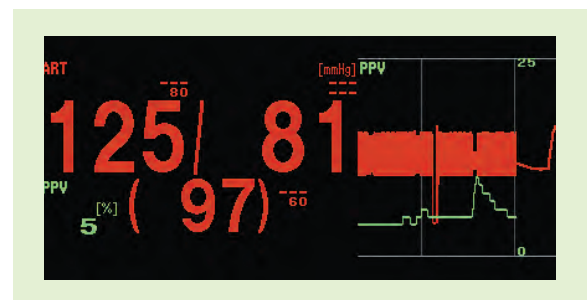


Hemodynamics graph



PPV/SPV less-invasive preload indicator

PPV (Pulse Pressure Variability) and SPV (Systolic Pressure Variability) are indicators of fluid responsiveness that can be measured in a minimally invasive way. This is a useful indicator in guiding fluid therapy for patients on mechanical ventilation.



Redefining quality of care with non-invasive hemodynamics monitoring

esCCO (estimated continuous cardiac output) is a new technology to determine the cardiac output using Pulse Wave Transit Time (PWTT) which is obtained from the pulse oximetry and ECG-signals.



esCCO provides real-time, continuous and non-invasive cardiac output measurement alongside the familiar vital sign parameters of ECG and SpO₂.

esCCO is very economical solution because it has no additional running costs or accessories.

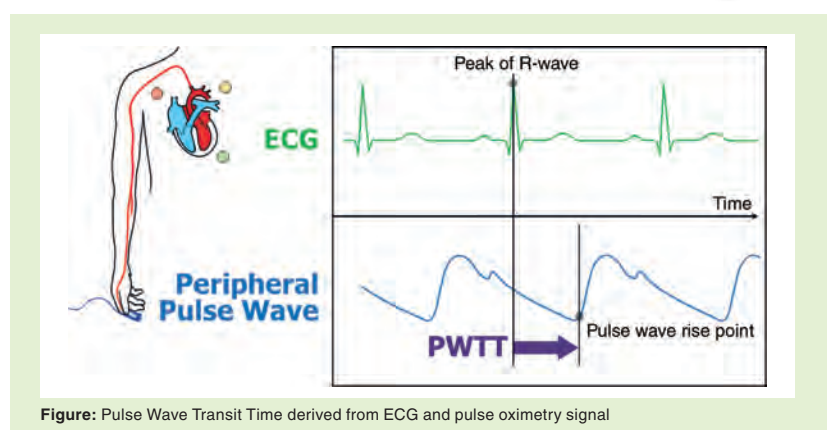


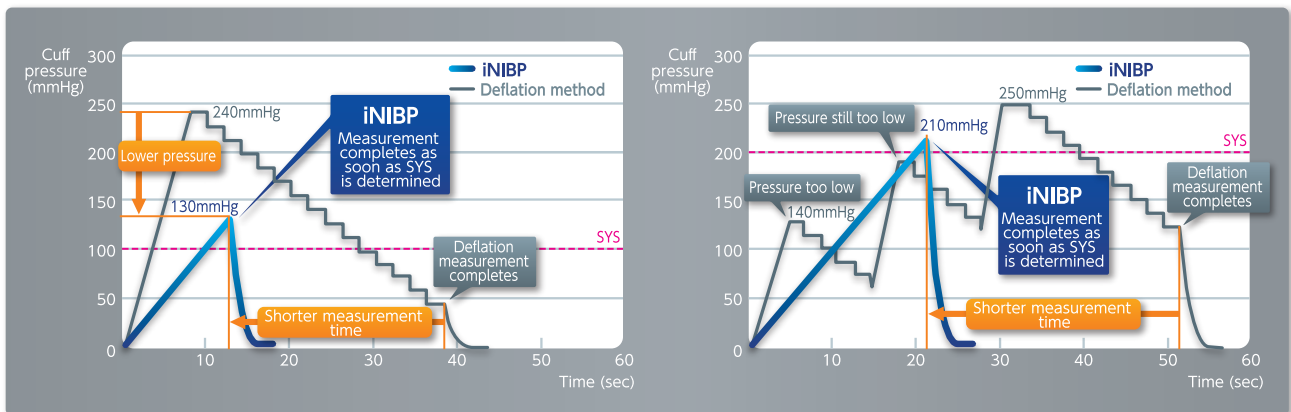
Figure: Pulse Wave Transit Time derived from ECG and pulse oximetry signal

Improving patient safety in hemodynamics management

NIBP (non-invasive blood pressure) is essential in hemodynamic monitoring. It is necessary to notice and respond as soon as possible when the patient's blood pressure changes.



iNIBP is Nihon Kohden's unique algorithm to measure NIBP during inflation. It provides fast and painless measurement of NIBP. Even if a patient's blood pressure increases compared to previous measurements, iNIBP still provides fast measurement of NIBP.



PWTT (Pulse Wave Transit Time) triggered NIBP measurement increases the chance of detecting a sudden change in blood pressure. When it is set to ON, the monitor calculates the estimated NIBP systolic pressure using PWTT and if it exceeds the alarm limit of NIBP systolic pressure, NIBP is subsequently measured automatically during periodic NIBP measurement.

Ensuring quality of care during sedation

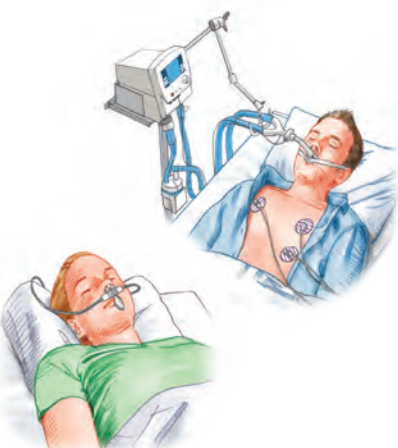
Currently clinical guidelines, including those of the American Society of Anesthesiologists (ASA) and Anesthesia Patient Safety Foundation (APSF), recommend capnography as one of the most reliable non-invasive methods to continuously monitor and assess the adequacy of the patient's respiratory condition during procedural sedation and analgesia.



A new class ultra compact and highly durable sensor will change your image of mainstream CO₂ sensors being easy to break. cap-ONE provides CO₂ monitoring for both intubated and non intubated patients.



cap-ONE mask is an oxygen mask with an integrated cap-ONE mainstream capnometer sensor. ETCO₂ can be measured using the integrated sensor while supplying oxygen, thanks to a unique design which catches the exhaled gas from the nose and mouth without interference from the oxygen supply.



Monitoring system network

Interbed monitoring

You can use any bedside monitor to check the vital information and alarm status of another monitor in the network, even if there is no central monitor.

Numeric data for 20 patients or numeric data and 2 waveforms for one patient can be displayed on the Interbed screen.

ICU 1

ICU 2

Multiple beds window

Individual bed window

When an alarm occurs in ICU 2, a monitor in ICU 1 alarms and indicates the alarm on the Interbed window.

Touch the screen of the patient to display detailed data.

ViTrac

Nihon Kohden's Unified Gateway is a client/server based application which provides a secure method for monitoring and viewing a wide range of patient data from Nihon Kohden monitors and devices. Patient data can be viewed in near real-time on an Apple's mobile iOS device within the hospital network or remotely via a VPN connection.

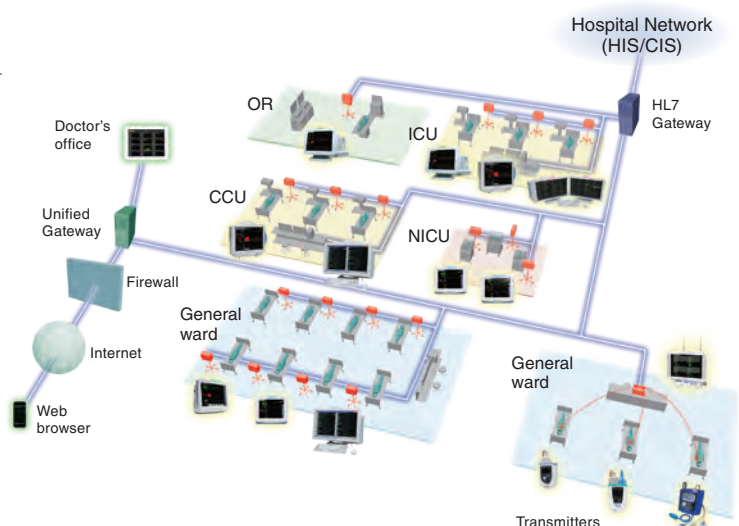


ViTrac provides medical personnel with monitoring information on multiple patients, any place any time.








HL7 gateway

An HL7 gateway connects the LS-NET monitor network to the hospital or clinical information system (HIS, CIS). Vital sign data, alarm history, arrhythmia and ST recall, 12-lead analysis reports, and waveforms* from the bedside monitor can be transferred using the HL7 protocol.

*Some limitations apply to transferring waveforms.



External units

<p>Ventilator</p> <ul style="list-style-type: none"> • Dräger • Medtronic • MAQUET • Hamilton • GE • Newport Medical • Air Liquide • ResMed • Metran • Care Fusion • Philips Respironics • Löwenstein Medical 	 <p>NMT module AF-101P</p>	 <p>Multigas unit GF-210R</p> <p>Multigas/flow unit GF-220R</p>
<p>Anesthesia workstation</p> <ul style="list-style-type: none"> • Dräger • MAQUET • Löwenstein Medical • GE • Air Liquide 	 <p>BSM-6000 series</p>	 <p>Neuro unit AE-918P</p>
<p>Transcutaneous monitor (tcpO₂/tcpCO₂)</p> <ul style="list-style-type: none"> • Radiometer MicroGas 7650 rapid, TCM4, TCM40, TCM Combi M 		 <p>BIS® processor QE-910P</p>
<p>Transcutaneous monitor (tcpO₂/tcpCO₂)</p> <ul style="list-style-type: none"> • Radiometer MicroGas 7650 rapid, TCM4, TCM40, TCM Combi M 	 <p>CCO monitor</p> <ul style="list-style-type: none"> • Edwards Lifesciences Vigilance, Vigilance II, Vigileo, EV1000 • ICU Medical Q2™, Q2™ Plus, Q-Vue™ • Pulsion Medical Systems PiCCO plus, PiCCO₂, PulsioFlex • LiDCO LiDCO rapid, LiDCO plus 	

*For the complete list of devices, please contact your Nihon Kohden representative.

Related products



Bedside monitor BSM-1700 series



- BSM-1763: for Nihon Kohden (SpO₂)
- BSM-1753: for Nellcor™ Oximax™ (SpO₂)
- BSM-1733: for Masimo SET® (SpO₂)

Major options



Input unit (3 MULTI connectors)
AY-663P: for Nihon Kohden (SpO₂)
AY-653P: for Nellcor™ Oximax™ (SpO₂)
AY-633P: for Masimo SET® (SpO₂)

Input unit (1 MULTI connector)
AY-661P: for Nihon Kohden (SpO₂)
AY-651P: for Nellcor™ Oximax™ (SpO₂)
AY-631P: for Masimo SET® (SpO₂)

Input unit (1 MULTI connector, IBP/CO₂ dedicated type)
AY-660P: for Nihon Kohden (SpO₂)

Smart unit (4 MULTI connectors)
AA-674P

Smart unit (2 MULTI connectors)
AA-672P

Memory unit
QM-600P

Hemodynamics review program (including esCCO)
QP-033P

esCCO program
QP-034P



Transmitter
ZS-900P



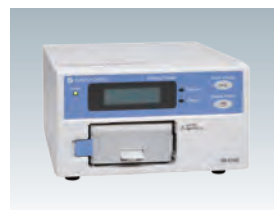
Data acquisition unit
JA-694PA (4 MULTI connectors)
JA-690PA (no MULTI connector)



Recorder module
WS-671P



Remote controller
RY-910PA



Battery charger
SB-610RK



Battery
X075

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