TECHNICAL GUIDE
&
PARTS CATALOGUE

Cal.NH3 Series

AUTOMATIC MECHANICAL

SII Products
**PARTS CATALOGUE / TECHNICAL GUIDE**

**Cal.NH3 Series**

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### Specfication

#### Movement

<table>
<thead>
<tr>
<th>Movement size</th>
<th>Outside diameter</th>
<th>Casing diameter</th>
<th>Total height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Φ27.40mm</td>
<td>Φ29.36mm (with dial holding spacer)</td>
<td>5.32mm</td>
</tr>
</tbody>
</table>

#### Cal. No.

<table>
<thead>
<tr>
<th></th>
<th>NH35</th>
<th>NH36</th>
<th>NH37</th>
<th>NH38</th>
<th>NH39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time indication</td>
<td>3Hands (hour, minute, second)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Date calendar</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Day calendar</td>
<td>-</td>
<td>-</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>24-hour indicator</td>
<td>-</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

#### Basic function

| Basic function | Manual winding | O | O | O | O |
|                | Automatic winding with ball bearing | O | O | O | O |
|                | Time setting with stop-second device | O | O | O | O |
|                | Date display with quick change | O | O | O | O |
|                | Day display with quick change | - | O | O | O |

#### Frequency

- 21,600 vibrations per hour
- 20~40 seconds per day

#### Accuracy

- Static accuracy
  - Direction of 3 positions: (1) Dial up, (2) 9 o'clock up, (3) 6 o'clock up
  - Measurement should be done within 10~60 minutes after fully wound up.
- Measurement position
  - Lift angle: 53 deg.
- Measurement time
  - 20 seconds
- Posture difference
  - Difference is under 60 seconds within max value and minimum value.
  - Measurement should be done within 10~60 minutes after fully wound up.
  - Direction of 4 positions: (1) 12 o'clock up, (2) 9 o'clock up, (3) 6 o'clock up, (4) 3 o'clock up
- Isochronisms (24h-0h)
  - 20~40 seconds per day.
  - Measurement position: Dial up
  - Difference of static accuracy of 24h and 0h

#### Duration time

- More than 41 hours ... Mainspring after fully wound up.
- Posture to confirmation: Dial up

#### Winding the mainspring

- << Movement >>
  - Fully wound up by turning the crown minimum 55 times.
  - Fully wound up by turning the ratchet wheel screw 8 times.
- << Complete Watch >>
  - A winding machine is needed to wind up the mainspring.
  - Full wind up conditions
    - Rotary speed: 30 rpm
    - Operating time: 60 minutes

#### Jewels

- 24 jewels

#### Crown position

<table>
<thead>
<tr>
<th>Crown position</th>
<th>Normal position</th>
<th>Left rotation</th>
<th>Right rotation</th>
<th>Manual winding</th>
<th>Free</th>
</tr>
</thead>
<tbody>
<tr>
<td>First click</td>
<td>Date setting</td>
<td>Date setting</td>
<td>Date setting</td>
<td>Time setting with stop-second device</td>
<td>Free</td>
</tr>
<tr>
<td>Second click</td>
<td>Time setting with stop-second device</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
</tbody>
</table>
<NH35/36/37>

1. 0963 300 ...Cal.NH36 only
   Snap for day star with dial disk

2. Day star with dial disk ...Cal.NH36 only
   Refer to page 8 for each parts code

3. 0989 070 ...Cal.NH36 only
   Intermediate wheel for day corrector

4. 0012 354
   Date indicator maintaining plate screw

5. 0808 183
   Date indicator maintaining plate

6. Date dial
   Refer to page 8 for each parts code

7. 0810 183
   Date jumper

Disassembling procedures Figs.
NH35/37 ④ → ⑩ NH36 ① → ⑩
Reassembling procedures Figs.
NH35/37 ⑩ → ④ NH36 ⑩ → ①

Type of oil
Moebius 9010

Oil quantity mark
NORMA L QUANTITY
SUFFICIENT QUANTITY

SII Products
PARTS CATALOGUE

<<NH35/36/37>>

14 Hour wheel
Refer to page 9 for each parts code

15 0261 183
Minute wheel and pinion

16 Refer to page 9 for each parts code

17 Refer to page 9 for each parts code

18 Cannon pinion
Refer to page 8 for each parts code

8 0962 025
Day-date corrector setting transmission wheel E

9 0012 485
Guard for day-date corrector setting transmission wheel screw

10 0836 183
Guard for day-date corrector setting transmission wheel

11 0962 185
Day-date corrector setting transmission wheel C

12 0962 023
Day-date corrector setting transmission wheel B

13 0737 183
Day-date corrector wheel

19 4408 172
Dial holding spacer

SII Products

Type of oil
Moebius 9010

Oil quantity mark
NORMAL QUANTITY

S-6

SUFFICIENT QUANTITY

S-4

*1

*2

13-1
Lower shock absorbing spring

13-2
Lower shock absorbing cap jewel

13-3
Lower hole jewel frame for shock-absorber

*3

*1

*2
PARTS CATALOGUE

Disassembling procedures Figs.
NH38/39 ① → ⑧
Reassembling procedures Figs.
NH38/39 ⑧ → ①

Type of oil

Oil quantity mark
NORMAL QUANTITY
SUFFICIENT QUANTITY

Moebius 9010
S-5
S-4

<<NH38/39>>

① 0012 354
Hour wheel guard screw

② 0376 184
Hour wheel guard

③ Hour wheel
Refer to page 9 for each parts code

④ 0261 183
Minute wheel and pinion

⑤ 0817 300 ...Cal.NH39 only
Intermediate 24hour wheel and pinion

⑥ 0157 184 ...Cal.NH39 only
24hour wheel

⑦ Cannon pinion
Refer to page 8 for each parts code

⑧ 4408 172
Dail holding spacer

① Lower shock absorbing spring

② Lower shock absorbing cap jewel

③ Lower hole jewel frame for shock-absorber

Refer to page 8 for each parts code

SII Products
Oscillating weight with ball bearing
Refer to page 8 for each parts code

Balance bridge screw

Balance cock

Balance complete with stud
Refer to page 8 for each parts code

Upper shock absorbing spring

Upper shock absorbing cap jewel

Upper hole jewel frame for shock-absorber

Automatic train bridge screw

Automatic train bridge

Second reduction wheel and pinion

Ratchet wheel screw

Ratchet wheel

Pallet bridge screw

Pallet bridge

Pallet fork

Type of oil

Moebius 9010

NORMAL QUANTITY

S-5

SUFFICIENT QUANTITY

S-4

Oil quantity mark

Disassembling procedures Figs.

Reassembling procedures Figs.

SII Products
PARTS CATALOGUE

- **Type of oil**: Moebius 9010
- **Oil quantity mark**
  - NORMAL QUANTITY
  - SUFFICIENT QUANTITY

1. **0511 010**
   - First reduction wheel
   - Refer to page 10 for oiling spot

2. **0831 183**
   - Pawl lever

3. **0836 002**
   - Reduction wheel holder

4. **0363 184**
   - Ratchet sliding wheel spring

5. **0114 183**
   - Barrel and train wheel bridge with hole jewel frame
   - Refer to page 10 for oiling spot

6. **0436 166**
   - Lower plate for barrel and train wheel bridge

7. **0012 354**
   - Lower plate for barrel and train wheel bridge screw

8. **0231 070**
   - Third wheel and pinion

9. **0381 004**
   - Click

10. **0201 083**
    - Barrel complete with mainspring

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**SII Products**
0012 354
Center wheel bridge screw

0122 302
Center wheel bridge

0251 300
Escape wheel and pinion

Refer to page 8 for each parts code

0012 168
Yoke spring screw

0388 177
Yoke spring

Refer to page 8 for each parts code

0601 183
Balance stop lever

Refer to page 11 for oiling spot

0282 183
Clutch wheel

0283 020
Winding pinion

0962 183 ... Cal.NH3/35/36/37
Day-Date corrector setting transmission wheel A

0351 200
Winding stem

SII Products
# Parts Catalogue

## 2. Day Star with Dial Disk

<table>
<thead>
<tr>
<th>Parts code</th>
<th>Position of Crown</th>
<th>Position of Day Frame</th>
<th>Color of Letters</th>
<th>Color of Background</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>0160 242</td>
<td>3H</td>
<td>3H</td>
<td>MON-FRI</td>
<td>Black</td>
<td>English &amp; Spanish</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SAT</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SUN</td>
<td>Red</td>
<td></td>
</tr>
</tbody>
</table>

## 6. Date Dial

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0878 208</td>
<td>3H</td>
<td>3H</td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>NH37</td>
<td>0878 206</td>
<td>3H</td>
<td>3H</td>
<td>Black</td>
<td>White</td>
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</tbody>
</table>

## 8. Balance Complete with Stud

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Parts Code</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0509 467</td>
<td>Japan mark</td>
</tr>
<tr>
<td></td>
<td>0509 468</td>
<td>Malaysia mark</td>
</tr>
<tr>
<td>NH38</td>
<td>0509 476</td>
<td>Japan mark</td>
</tr>
<tr>
<td></td>
<td>0509 477</td>
<td>Malaysia mark</td>
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</table>

## 20. Fourth Wheel and Pinion

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Parts Code</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0144 184</td>
<td>Japan mark</td>
</tr>
<tr>
<td>NH36</td>
<td>0144 185</td>
<td>Malaysia mark</td>
</tr>
<tr>
<td>NH37</td>
<td>0144 186</td>
<td>Malaysia mark</td>
</tr>
</tbody>
</table>

## 27. Center Wheel and Pinion with Cannon Pinion

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Parts Code</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0224 184</td>
<td>Japan mark</td>
</tr>
<tr>
<td>NH36</td>
<td>0224 185</td>
<td>Malaysia mark</td>
</tr>
<tr>
<td>NH38</td>
<td>0224 186</td>
<td>Malaysia mark</td>
</tr>
</tbody>
</table>

## 30. Yoke

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Parts Code</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0384 183</td>
<td>Japan mark</td>
</tr>
<tr>
<td>NH36</td>
<td>0384 184</td>
<td>Malaysia mark</td>
</tr>
<tr>
<td>NH37</td>
<td>0384 185</td>
<td>Malaysia mark</td>
</tr>
</tbody>
</table>

## 31. Setting Lever

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Parts Code</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH35</td>
<td>0383 185</td>
<td>Japan mark</td>
</tr>
<tr>
<td>NH36</td>
<td>0383 186</td>
<td>Malaysia mark</td>
</tr>
<tr>
<td>NH37</td>
<td>0383 187</td>
<td>Malaysia mark</td>
</tr>
</tbody>
</table>
### Remarks: Different parts for each CAL.

<table>
<thead>
<tr>
<th>Page No</th>
<th>Parts code</th>
<th>Parts name</th>
<th>Parts form</th>
<th>Page No</th>
<th>Parts code</th>
<th>Parts name</th>
<th>Parts form</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-3</td>
<td>O</td>
<td>-</td>
<td>-</td>
<td>P-4</td>
<td>-</td>
<td>O</td>
<td>0273 183</td>
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<td>-</td>
<td>O</td>
<td>-</td>
<td></td>
<td>-</td>
<td>O</td>
<td>0273 184</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>O</td>
<td></td>
<td>-</td>
<td>-</td>
<td>0273 183</td>
</tr>
<tr>
<td></td>
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<td>-</td>
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<td></td>
<td>-</td>
<td>O</td>
<td>0273 185</td>
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<tr>
<td>P-3</td>
<td>O</td>
<td>O</td>
<td>-</td>
<td>P-3</td>
<td>O</td>
<td>O</td>
<td>0817 300</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>O</td>
<td></td>
<td>-</td>
<td>-</td>
<td>0273 183</td>
</tr>
<tr>
<td>P-3</td>
<td>O</td>
<td>O</td>
<td>-</td>
<td>P-3</td>
<td>O</td>
<td>-</td>
<td>0802 183</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>O</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>0157 182</td>
</tr>
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</table>

#### List of screw

<table>
<thead>
<tr>
<th>Page No</th>
<th>Parts code</th>
<th>Parts name</th>
<th>Parts form</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-2</td>
<td>0012 354</td>
<td>Date indicator maintaining plate screw</td>
<td>(x4)</td>
</tr>
<tr>
<td>P-2</td>
<td>0012 919</td>
<td>Ratchet wheel screw</td>
<td></td>
</tr>
<tr>
<td>P-2</td>
<td>0012 420</td>
<td>Balance bridge screw</td>
<td></td>
</tr>
<tr>
<td>P-2</td>
<td>0012 485</td>
<td>Guard for day-date corrector setting</td>
<td></td>
</tr>
<tr>
<td>P-3</td>
<td>-</td>
<td>Automatic train bridge screw</td>
<td>(x2)</td>
</tr>
<tr>
<td>P-3</td>
<td>-</td>
<td>Pallet bridge screw</td>
<td>(x2)</td>
</tr>
<tr>
<td>P-3</td>
<td>-</td>
<td>Lower plate for barrel and train wheel</td>
<td></td>
</tr>
<tr>
<td>P-3</td>
<td>-</td>
<td>Center wheel bridge screw</td>
<td></td>
</tr>
<tr>
<td>P-3</td>
<td>0012 168</td>
<td>Yoke spring screw</td>
<td>(x2)</td>
</tr>
<tr>
<td>P-4</td>
<td>0273 182</td>
<td>Hour wheel</td>
<td></td>
</tr>
<tr>
<td>P-4</td>
<td>0273 183</td>
<td>Intermediate date driving wheel and pinion</td>
<td></td>
</tr>
<tr>
<td>P-4</td>
<td>0273 184</td>
<td>Intermediate 24hour wheel and pinion</td>
<td></td>
</tr>
<tr>
<td>P-4</td>
<td>0273 185</td>
<td>Date indicator driving wheel</td>
<td></td>
</tr>
</tbody>
</table>

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SII Products
1. Oiling spot

⑬ Barrel and train wheel bridge with hole jewel frame

Note

*2 After oiling, set lower plate for barrel and train wheel bridge & screw.

*3 After oiling, set first reduction wheel & pawl lever & reduction wheel holder.
2. Setting position of oscillating weight
   - Before assembling oscillating weight.
   Match the center of the oscillating weight and winding stem. Set the hole of first reduction wheel gear on the imaginary line toward the balance bridge guide pin.

3. To remove the winding stem
   1) Set the winding stem to normal position.
   2) Pull out the winding stem, while pushing "A"
4. Disassembling / assembling of the First reduction wheel

"Disassembling"

- First reduction wheel
- Reduction wheel holder
- Barrel and train wheel bridge (back side)

"Assembling"

5. Disassembling / assembling of the Ratchet sliding wheel spring.

"Disassembling"

- Ratchet sliding wheel spring
- Barrel and train wheel bridge with hole jewel frame

"Assembling"

Instructions:

- Remove the hook of the ratchet sliding wheel spring from barrel and train wheel bridge with hole jewel frame.
- The hooks of ratchet sliding wheel spring are hung up on barrel and train wheel bridge with hole jewel frame.
6. Accuracy adjustment

- Regulator ... Time adjustment
- Stud support ... Beat error adjustment
- Regulator pin ... Gap adjustment of balance spring and regulator pin

Note:
- (+) side
- (-) side

Anticlockwise rotation
No clockwise rotation
7. To wind up the mainspring

<<Movement>>

The mainspring would be fully wound up by turning the ratchet wheel screw 8 times clockwise. (Manual winding or Screwdriver)

- Manual winding ... Rotate crown clockwise at normal position by min 55 times. (Equal to ratchet wheel screw 8 times)
- Screwdriver winding ... Turn the ratchet wheel screw 8 times clockwise.

8. How to attach hands

Place the movement directly on a flat metal plate or something similar to attach the hands.

We recommend the use of movement holder to attach hands.

For hands attachment, please use a special equipment.

When the movement receives a strong shock, it may be damaged.

*Install the 24hour hand ... Cal.NH37 & NH39

Pull out the crown to the second click position and rotation it clockwise to install 24hour hand.

9. Accuracy measurement condition

Static Accuracy : -20~+40 seconds per day

- Measurement Conditions
  1) Measurement should be done within 10~60 minutes after fully wound up.
  2) Lift angle : 53 deg
  3) Measurement position : (1) Dial up (2) 9 o'clock up (3) 6 o'clock up
  4) Minimum measurement Time : 20 seconds
  5) Stabilizing Time :

      Leave the watch for at least 20 seconds to stabilize after you change its measurement position.

10. About the handling ... Cal.NH38 & 39

- Part is processed as a mirror surface. It is damaged when touching with tweezers.

Please be careful about the handling.
1. How to set the time

1) Pull out the crown to the second click position.  ...Cal.NH35 & NH36 & NH37
   - Pull out the crown to the first click position.  ...Cal.NH38 & NH39
2) Turn the crown to set hour and minute hands.
   (Check that AM / PM is set correctly.)
3) Push the crown back into the normal position.

2. How to set the Date ...Cal.NH35 & NH36 & NH37

1) Pull out the crown to the first click position.
2) Turn the crown to left for date setting.
3) Turn the crown to right for day setting.  ...Cal.NH36 only
   * Do not set the date between 9:00 P.M. and 4:00 A.M. as this will cause a malfunction.
3) Push the crown back into the normal position.

3. To wind up the mainspring

a) Manual winding ... Rotate the crown clockwise at normal position.
   - Wind turning the ratchet wheel screw 8 times. It will start to move naturally after shaking slightly.

b) To wind up with winding machine.
   - Full wind up conditions
     - Rotary speed : 30 rpm
     - Operating time : 60 rpm