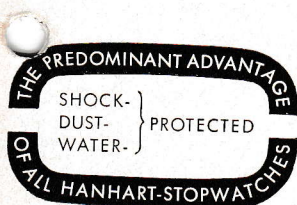


ABRIDGED CATALOGUE 2/65



**ADOLF HANHART
WATCHFACTORY**


7220 SCHWENNINGEN/NECKAR
FOUNDED 1882 · GERMANY
CABLE-ADDRESS:
HANHART SCHWENNINGENNECKAR
TELEX: 0794520
PHONE: 1393 & 2320

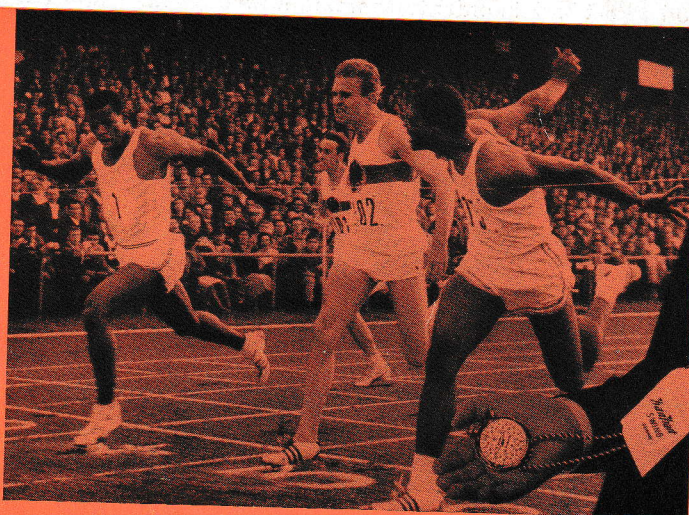


DIAMOND POLISHED CASE!
UNBREAKABLE MAINSPRING!

THE MOST-BOUGHT STOPWATCH IN THE WORLD!



Worldreference: Even Swiss industries ask for the famous  -Stopwatches!



2.65 Pr.

***Hanhart* PRECISION STOPWATCHES ARE TOP QUALITY PRODUCTS**
WITH THE FOLLOWING OUTSTANDING FEATURES

- 1** Dust and water-protected cases.
- 2** Shock-proof balance.
- 3** Unbreakable, rustless, antimagnetic mainspring.
- 4** Large clear dial calibrations, readable at a glance.
- 5** Cases are diamond polished, proportioned for easy handling and are gripfast. Diameter 55 mm = 2.16".
- 6** Cases are fitted with dampproof, acidproof and age resisting gaskets.
- 7** All movable parts of *Hanhart* watches are tested by special electrical devices to ensure perfect functioning. Hand-testing and the hazards of human errors are thus eliminated.
- 8** All types of *Hanhart* watches are fitted with antimagnetic, self-compensating hairsprings to eliminate temperature errors, the quality varying with the quality of the watch.
- 9** Only our own metal screw-on dials are used as these are preferable to enamelled peg-fitting dials which cannot be printed accurately and are often "out-of-true".
- 10** The special "return to zero" mechanism in *Hanhart* stopwatches are so constructed that even after being used 10.000 times, the hands will automatically return **exactly** to zero.

SHOCK-, DUST- AND WATERPROTECTED ***Hanhart*** THE MOST-BOUGHT STOPWATCHES

PRODUCTS

Hanhart are the only manufactures of stopwatches who, for 25 years, have issued catalogues including tables and data of timekeeping tolerances for their main three qualities of stopwatches.

Cal. No.	Movement	Tolerance limits
38/... or 36/...	19''' pinlever 3 jewels	0,08 — 0,20 ‰
48/... or 46/...	19''' lever 7 jewels	0,0 — 0,05 ‰
58/... or 56/...	19''' lever 11 jewels	0,0 — 0,03 ‰
72/...	19''' lever 11 jewels	
786/... doublehand-timer	19''' lever 7 jewels	
86/... doublehand-timer	19''' lever 13 jewels	

11

12

As the first series-produced stopwatches in the world, *Hanhart* 11 — 13 jeweled precision watches are equipped with Maltese-Cross Stopwork. This is always fitted to the highest grade watches and chronometers and its function is to stabilise the power of the mainspring during the entire run of the watch so that very close timekeeping can be achieved.

13

All *Hanhart* stopwatches — even the cheapest — are scrupulously examined during manufacture and electronically tested and regulated on completion.

14

Every *Hanhart* stopwatch carries a Guarantee for one year from date of purchase together with full instructions for use.

15

All steel parts of *Hanhart* stopwatches are tempered and rust-resistant; the working surface precision cut and highly polished to prevent premature wear. All springs, especially of the stopping mechanism, are made of rustless, drawn-steel wire which is almost unbreakable. These are far superior to the cheaper machine-pressed springs.

16

The shifting action of *Hanhart* Additiontimer is absolutely foolproof. No other action can be simultaneously or erroneously operated.

17

The basic diameter of all cases is approximately 55 mm.

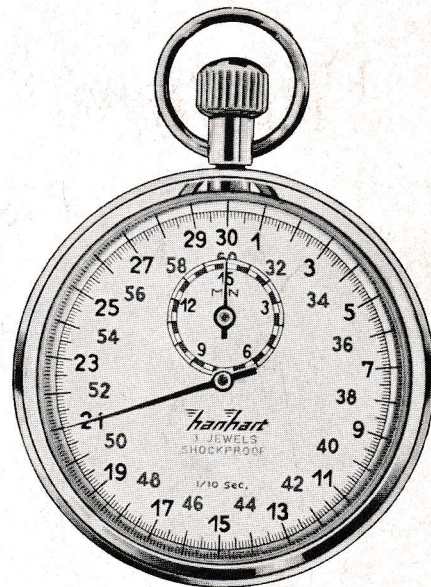
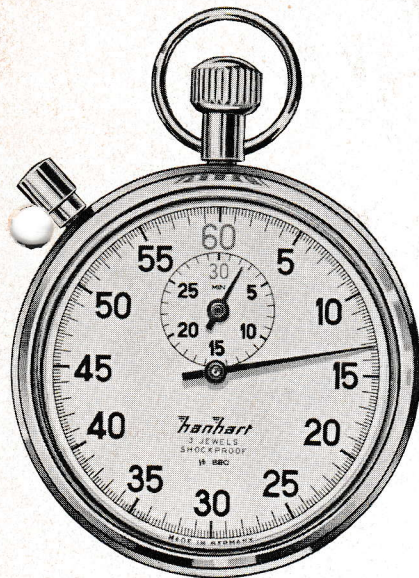
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Only Plexiglas (non-expanding, non shrinking) crystals are fitted to our watches.

RUNNING TIME	1/5 sec. & 1/100 min.	1/10 sec.	1/30 sec.	1/50 sec.	1/100 sec.	
cal. 36/38	12 — 14	6 — 7	2			hours
cal. 46/48	18 — 20	9 — 10	3			hours
cal. 56/72/86 with maltese cross stopwork	12 — 14	6 — 7	2	1	1/2	hours

STOPWATCH IN THE WORLD **Hanhart** SHOCK-, DUST- AND WATERPROTECTED

FOR SPORT, POLICE, MILITARY, LABORATORY etc.



Additions - Stopper $\frac{1}{5}$ sec.

361/5	Pinlever	1 jewel
36/5	Pinlever	3 jewels
367/5	Pinlever	7 jewels
46/5	Lever	7 jewels
56/5	Lever	11 jewels

For industry, science, laboratory

Same dial also available as:

Crown-stopper	381/5 Pinlever	1 jewel
Crown-stopper	38/5 Pinlever	3 jewels
Crown-stopper	387/5 Pinlever	7 jewels
Crown-stopper	48/5 Lever	7 jewels
Crown-stopper	58/5 Lever	11 jewels
Double-Addition-Stopper		
	786/5 Lever	7 jewels
	86/5 Lever	13 jewels

Crownstopper $\frac{1}{10}$ sec.

381/10	Pinlever	1 jewel
38/10	Pinlever	3 jewels
387/10	Pinlever	7 jewels
48/10	Lever	7 jewels
58/10	Lever	11 jewels

The standard model for sport, military, schools, industry and general use

Same dial available as:

Add.-stopper	361/10 Pinlever	1 jewel
Add.-stopper	36/10 Pinlever	3 jewels
Add.-stopper	367/10 Pinlever	7 jewels
Add.-stopper	46/10 Lever	7 jewels
Add.-stopper	56/10 Lever	11 jewels
Double-Stopper	786/10 Lever	7 jewels
Double-Stopper	86/10 Lever	13 jewels

SHOCK-, DUST- AND WATERPROTECTED **Hanhart** THE MOST-BOUGH

FOR SCIENCE AND TECHNOLOGY



AWF 2 Addition-Double-Stopper

786/100	Lever	7 jewels
86/100	Lever	13 jewels

For time study, complicated comparative timing, industrial, technical and laboratory use, etc. dial calibrated $\frac{1}{100}$ minute.

Also available as crown-stopper and single addition-stopper

381/100	361/100	Pinlever	1 jewel
38/100	36/100	Pinlever	3 jewels
387/100	367/100	Pinlever	7 jewels
48/100	46/100	Lever	7 jewels
58/100	56/100	Lever	11 jewels
	72/100	Lever	11 jewels

Crownstopper

with combined scales $\frac{1}{5}$ second & $\frac{1}{100}$ minute

381/105	Pinlever	1 jewel
38/105	Pinlever	3 jewels
387/105	Pinlever	7 jewels
48/105	Lever	7 jewels
58/105	Lever	11 jewels

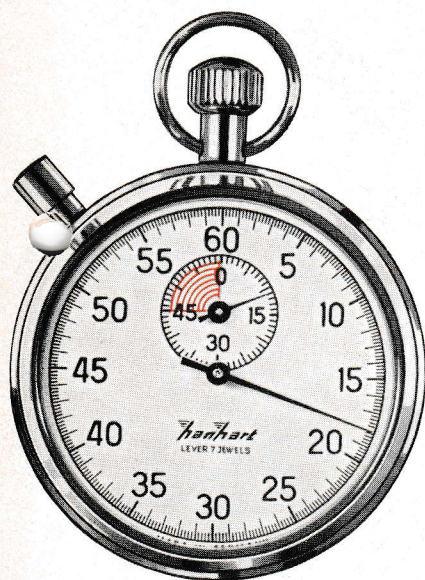
For industry, laboratory, time-study etc.

Same dial available as:

Add.-stopper	361/105	Pinlever	1 jewel
Add.-stopper	36/105	Pinlever	3 jewels
Add.-stopper	367/105	Pinlever	7 jewels
Add.-stopper	46/105	Lever	7 jewels
Add.-stopper	56/105	Lever	11 jewels
Double-stopper	786/105	Lever	7 jewels
Double-stopper	86/105	Lever	13 jewels

THE MOST ACCURATE STOPWATCH IN THE WORLD **Hanhart** SHOCK-, DUST- AND WATERPROOF

FOR REFEREES AND SPORTS-UMPIRES



**Referees' or Umpires
Addition-Stopwatch**

136/F Pinlever 3 jewels
146/F Lever 7 jewels

with 60 minute recorder

for football, hockey, handball, water-
ball, basketball



Yachting Crownstopper

48/Y Lever 7 jewels

5 minute recorder

also available with
10 and 15 minute recorder

PROTECTED  THE MOST-BOUGHT STOPWATCH IN THE WORLD

FOR ADVANCED PRECISION TIMING



The double-sized centre-jumping minute recorder Megaminute-timers

Clear reading at a glance!

With an enlarged red minute scale and a correspondingly large centre indicator which jumps one black seconds-hand.

Addition-timer $\frac{1}{5}$ sec.

436/5	pinlever	3 jewels
446/5	lever	7 jewels
456/5	lever	11 jewels

Addition-timer $\frac{1}{10}$ sec.

436/10	pinlever	3 jewels
446/10	lever	7 jewels
456/10	lever	11 jewels

With this type of watch, no mistake in reading can be made as the minute recorder indicates the minute hand jumps $\frac{1}{2}$ minute when the seconds-hand completes a full sweep of the dial. The

SHOCK-, DUST- AND WATERPROTECTED **Hanhart** THE MOST-BOUG

FOR EVERY TIMING REQUIREMENT



minute on completion of the full 60 seconds of the

Addition-timer $\frac{1}{100}$ min.

- 436/100 pinlever 3 jewels
- 446/100 lever 7 jewels
- 456/100 lever 11 jewels

minute which has passed. In the $\frac{1}{10}$ sec. model the reading on the $\frac{1}{10}$ sec. illustration is 6 min. 25,5 secs.

New Hanhart - Swing Stopwatch

The conventional bow attached to the pendant itself. To overcome these failings Hanhart has (improved its appearance) and is provided with two rings we

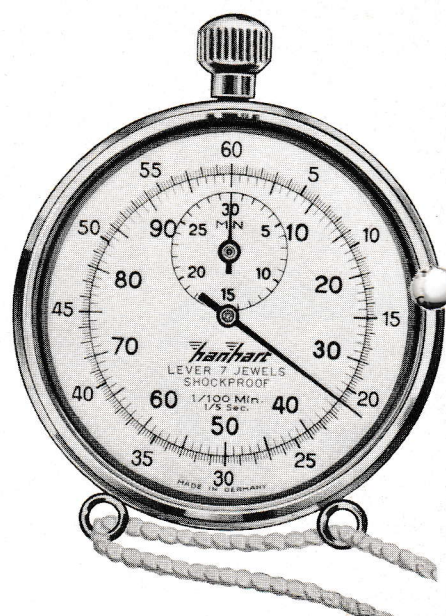
Addition-timer

- S 546/10 Swing lever 7 jewels

THE MOST ACCURATE STOPWATCH IN THE WORLD **hanhart** SHOCK-, DUST- AND WATERPROOF

IREMENT

— International design patent —



es with cord

of a stopwatch has to be bent back in order to operate the watch; further, it can accidentally detach
ve introduced the new SWING model which dispenses with the bow, has a shorter pendant (to improve
lded to the base of the case to accomodate a cord attachment to be worn round the neck of the operator.

Addition-timer

S 546/5 Swing lever 7 jewels

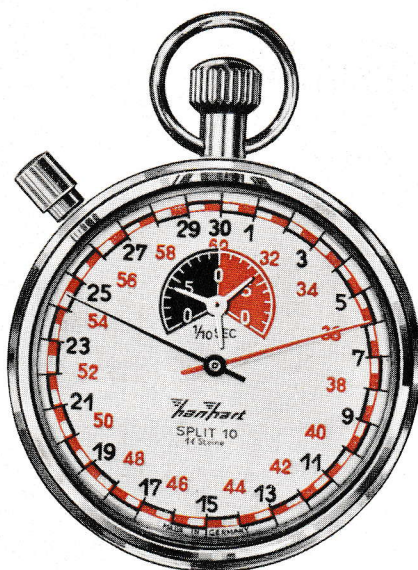
Crownstopper

S 548/105 Swing lever 7 jewels

»SWING« cases can be fitted to all our stopwatches, irrespective of dial or type of movement.
Protective covers are supplied with all these models.

ROTECTED **Hanhart** THE MOST-BOUGHT STOPWATCH IN THE WORLD

FOR SPORT, SCIENCE, MILITARY, TECHNOLOGY



The **Hanhart Split-10**

with enlarged $\frac{1}{10}$ sec. dial. With this watch $\frac{1}{10}$ second can be read on a separate **magnified dial**

Addition-timer $\frac{1}{10}$ sec.

367/Split 10 pinlever 7 jewels
46/Split 10 lever 7 jewels

The **seconds** are indicated, as usual, by the black hand in jumps of $\frac{1}{10}$ second on the outer scale which is calibrated in seconds and half-seconds and is traversed by the seconds-hand in 30 seconds.

The **minutes** are indicated by the red hand on the same scale. If the red hand stops on the red segment, it means that the seconds-hand has already traversed 30 seconds (a complete sweep round the dial) and the seconds must be read from the red numerals. If the hand stops on the white segment, then the seconds are read from the black numerals.

The $\frac{1}{10}$ second are indicated by the three-pointed star hand on the inset red-and-black sector dial which is calibrated in $\frac{1}{10}$ second. The reading can be taken from either the black or red portion.

Crownstopper $\frac{1}{30}$ sec.

The fast-moving seconds-hand sweeps the dial in 10 seconds, hence, the reading of $\frac{1}{10}$ second is very clear and simple. Used for accurate brief timings of less than five minutes.

For military and laboratory use, especially for close readings in calculating the coefficient of viscosity.

58/300 lever 11 jewels
48/300 lever 7 jewels

Same dial for **addition-timer**

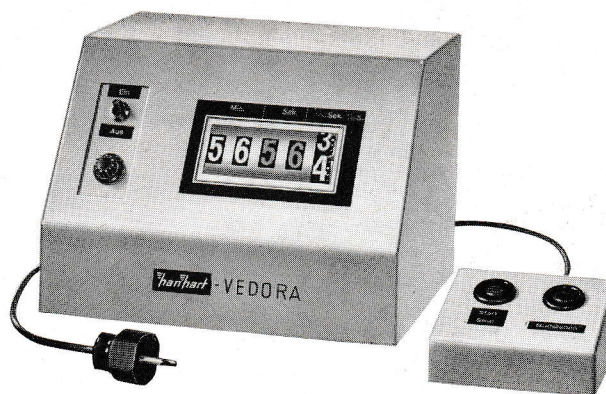
56/300 lever 11 jewels
361/300 pinlever 1 jewel

and **double-hand additiontimer:**

786/300 lever 7 jewels
86/300 lever 13 jewels

SHOCK-, DUST- AND WATERPROTECTED **Hanhart** THE MOST-BOUGHT

FOR SCHOOLS, SPORT, INDUSTRY, SCIENCE



Size approx. 28 x 20 x 20 cm
11" x 7 7/8" x 7 7/8"

Weight: app. 9 kos = 20 lbs.

Weight with packing: app. 11,5 kos = 25 lbs.

Time shown is 56 min. 56 + 3/10 + 8/50 ths. seconds
56 min. 56 · 36 secs

New **hanhart** Vedora

All-electric digital stopclock with remote control.

In light green lacquered metal case. Complete instrument together with separate START, STOP and RETURN TO ZERO switchbox and 1,50 m = 60 inch cable and plug.

To be operated on any A.C. mains supply 50 or 60 cycles, according to requisite voltage.

hanhart »VEDORA« is far safer and more accurate than any orthodox method of time recording. Even a child can read it correctly!

The clock will register for 59 minute 59, 98 seconds, and an accurate reading to 1/50th of a second can be taken.

The digital recording is continuous so long as the START button is depressed.

The machine is switched off by operating the ON, OFF switch.

Remote control: The START and STOP can be operated by remote control either by a light-beam or by application of a radio control apparatus. The necessary equipment can be connected by means of a »Tuchel« plug attached to the left side of the stopclock.

T STOPWATCH IN THE WORLD **hanhart** SHOCK-, DUST- AND WATERPROOF

FOR AUTOMATIC PRECISION TIMING



The **Hanhart** Relay Stopwatch in Stopstand

656/1000 lever 11 jewels

$\frac{1}{100}$ of a second calibration. Centre-hand makes one complete turn in 3 seconds.

Operating on current 12 - 24 volts.

It is impossible to operate a high-speed stopwatch manually with any degree of accuracy because of:

1. Human reaction and consequent error.
2. Mechanical error inherent in stopping mechanism which is not absolutely instantaneous.

In the **Hanhart** Relay Stopwatch the stopping of the watch is effected by the direct arrest of the balancewheel which eliminates even the minutest error which the orthodox depress mechanism introduces, no matter how accurately it is made.

The **Hanhart** Relay Stopwatch is wound manually but electrically operated by remote control, providing that the necessary equipment has been installed; or, by manually operating the »return to zero« and the »start« and »stop« by remote control.

This watch can be supplied with all kinds of dial calibrations

STOP-STAND can be supplied without the watch, the watch without the stop-stand.

DETECTED **Hanhart** THE MOST-BOUGHT STOPWATCH IN THE WORLD