

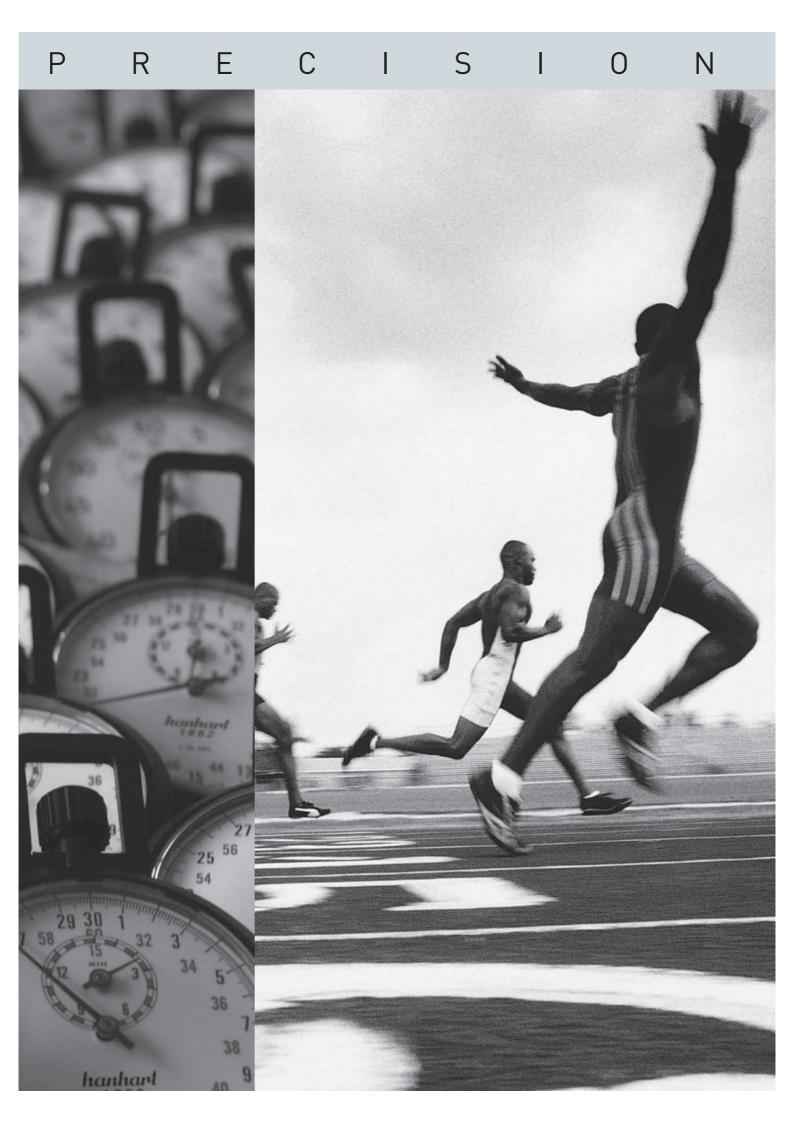
STOPWATCHES

hanhart 1882

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LEGENDARY PONEER PRECISION TIMEKEEPING



TIMEKEEPING

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Q U A L I T Y A N D



A pioneer in precision timekeeping

Hanhart – today the leading manufacturer of stopwatches, market leader for mechanical stopwatches and specialist in high-precision, functional instrument watches for use in the air, on the land and on the sea – has its roots in the traditional craftsmanship and art of watchmaking in Switzerland and southern Germany.

The company was founded in 1882 in Diessenhofen in Switzerland by Johann A. Hanhart. In 1902, the watchmaking business moved to the watchmaking capital of southern Germany, Schwenningen/Neckar.

It was as early as 1924 that Hanhart launched the world's first affordable mechanical stopwatch. At that time, these timepieces came exclusively from Switzerland and were only available - if at all - at very high prices, since they were virtually only ever produced as one-off items. The great success of this stopwatch laid the foundations for further innovative technical developments, such as the complicated split-second stopwatch or an ultrafast oscillator with a balance wheel frequency of 360,000 vibrations per hour, which enabled Hanhart to become one of the first manufacturers of watches capable of measuring hundredths of a second.

As the company grew, a second factory was established in the southern German town of Gütenbach in 1934. This is still where the entire stopwatch collection is manufactured today, and some of the wristwatches.

Then in 1938 a new era began – the first Hanhart chronograph model, the mono-pusher "Calibre 40", went into production. This was followed in 1939 by the legendary pilot's chronographs "Calibre 41" and "TachyTele".

After the Second World War and the dismantling of the production facilities by the occupying forces, the hard work of reconstruction began in 1949. By the early 1950s, production was already in full swing again. Hanhart began to concentrate increasingly on making mechanical stopwatches. In 1962, Hanhart amazed the market with its low-priced stopwatch "Amigo" – precision mechanics in a plastic case.

With the start of the era of the quartz watch, Hanhart set up its own plastics injection moulding plant and developed a quartz movement which would subsequently be sold by the millions. During these years, the range of mechanical and electronic stopwatches, quartz watches and alarm clocks being produced expanded steadily.

With the renaissance of traditional watchmaking in the mid-1990s, Hanhart was able to draw on its own pioneering achievements from the past: from 1997 onwards, it began to make faithful reproductions of the legendary pilot's chronographs in new and limited editions, using the old tools and specifications. These replica chronographs have been enormously popular with collectors

and enthusiasts.

Nowadays high-quality mechanical timepieces, painstakingly manufactured in numerous individual stages at the factory in Gütenbach, continue to represent an important product segment for Hanhart alongside its wide range of stopwatches for industry and sport. Just as they were used in the past for all important car races, amongst other things, now they are the essential rallying companion for ambitious vintage car drivers.

The design and technology of the wrist-watches in the Pioneer and Primus collections are also based on Hanhart's vast expertise and long tradition of making chronographs.

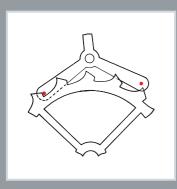
They combine historic features such as the red button – Hanhart's trademark since 1939 – with the latest technology and contemporary design.

P R E C I S I O N

Lever design

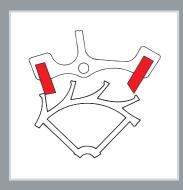
Pin lever design, 1 or 7 jewels, depending on the model

The pin lever escapement with shock-resistant balance wheel is a very robust and reliable technology. It guarantees superb accuracy that will last for decades.



Swiss lever escapement, 7, 9 or 11 jewels, depending on the model

The lever escapement (2 jewels on the lever) and the shock-resistant balance wheel increase the accuracy and lifespan of these mechanical precision stopwatches. We use the Swiss lever escapement for stopwatches which will run for long periods and/or for fast-beat movements.





Split-seconds addition timer (hand wound at crown)

Page 8

For time measurement with interrupt option, drag indicator for split time measurement

Stop the split time with drag indicator Reset and zero-setting of

the drag indicator

Zero-setting

Flyback (Tempo) optional on all models

Crown Right button

Right button Crown Left button



No. Movement type		Quality features					
			Accurate running time $1/_5 + 1/_{100}$	Accuracy $\frac{1}{5} + \frac{1}{100}$	Accurate running time 1/ ₁₀	Accuracy 1/ ₁₀	
135	19‴ pin lever	7 jewels	16-18 hours	0.02 %	8-9 hours	0.03 %	

Addition timer (hand wound at crown)

For time measurement with interrupt option

Start Stop **Zero-setting** Flyback (Tempo) optional on all models Crown Crown Side button



No. Movement type		Quality features					
			Accurate running time $1/_5 + 1/_{100}$	Accuracy $\frac{1}{5} + \frac{1}{100}$	Accurate running time 1/10	Accuracy 1/ ₁₀	
121	19‴ pin lever	1 jewel	10-12 hours	0.04 %	5-6 hours	0.06 %	
122	19‴ pin lever	7 jewels	10-12 hours	0.04 %	5-6 hours	0.06 %	
126	19‴ lever	11 jewels	16-18 hours	0.02 %	_	_	
185	19‴ lever	7 iewels	16-18 hours	0.02 %	8-9 hours	0.03 %	

Crown stopper (hand wound at crown)

Simple time measurement with no interrupt option

Start	Crown
Stop	Crown
Zero-setting	Crown



Page 20

Page 10



No. Movement type (Quality features					
		Accurate running time $1/_5 + 1/_{100}$	Accuracy $\frac{1}{5} + \frac{1}{100}$	Accurate running time 1/10	Accuracy 1/ ₁₀		
	112 115	19‴ pin lever 19‴ pin lever 19‴ pin lever 19‴ lever	7 jewels 7 jewels	10-12 hours 10-12 hours 10-12 hours 10-12 hours	0.04 % 0.04 % 0.03 % 0.03 %	5-6 hours 5-6 hours 5-6 hours 8-9 hours	0.06 % 0.06 % 0.06 % 0.08 %

Addition timer (hand wound at crown)

For time measurement with interrupt option

Start Green button Red button Stop Zero-setting White or black button

Flyback (Tempo) standard on "Amigo" models (except Allsport)

No.	Movement t	ype	Quality features				
			Accurate running time $1/_5 + 1/_{100}$	Accuracy $\frac{1}{5} + \frac{1}{100}$	Accurate running time 1/10	Accuracy 1/ ₁₀	
164	19‴ pin lever	0 jewels	60 minutes	0.08 %	30 minutes	0.14 %	
174	19" pin lever	0 jewels	60 minutes	0.08 %	30 minutes	0.14 %	
141	19‴ pin lever	0 jewels	10-12 hours	0.06 %	5-6 hours	0.08 %	
152	19‴ pin lever	7 jewels	_	_	8-9 hours	0.08 %	

Quality and precision

In the field of mechanical stopwatches, Hanhart is the acknowledged market leader, as demonstrated by its extensive product range, which covers every possible function.

movements with high-quality Swiss lever escapements or with the sim-pler pin lever technology. The cases are made of metal or ABS plastic, and certain models have extra dust and water protection.

the following criteria should be considered:

• Function

• Movement type (lever, pin lever, jewels)

• Case (metal, ABS, dust and

24 month Hanhart guarantee Made in Germany

Split-seconds addition timer

Addition timer for time measurement with interrupt option, with drag indicator for split time measurement.

All models have a diamond-cut, chrome-plated brass case, polished or matt.

All models feature a lever escapement with 7 jewels. They are shockresistant and have additional dust and water protection.

Calibration

See description on page 40



135.0101-0S

Pin lever, 7 jewels 1/5 sec. 30 min. Case \varnothing 55 mm, weight 130 g



135.0401-0S

Pin lever, 7 jewels $1/_{10}$ sec. 15 min. Case \varnothing 55 mm, weight 130 g



135.0201-0S

Industry model

Pin lever, 7 jewels $1/_{100}$ min. 30 min. Case \varnothing 55 mm, weight 130 g



135.0301-0S

Industry model

Pin lever, 7 jewels 1/5 sec. + 1/100 min. 30 min. Case \emptyset 55 mm, weight 130 g

Addition timer with drag indicator

Industry model

Precision mechanics with mineral glass, metal crown and metal comfort button.

"Horsemen's"

Extra-large numbers, crown and 1 button, with drag indicator and leather wrist loop for equestrian sports.

Split-seconds addition timer with flyback and rotating countdown hezel

The numerals ring on the rotating countdown bezel helps achieve exactly the correct time specifications (seconds) for individual measuring processes. The drag indicator allows split times to be measured, while the flyback function allows timing to be started immediately with no time lost from the current measuring process.



135.4101-5S

Industry model

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g



135.0101-5S

Industry model

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g



135.5709-0S

Horsemen's

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 130 g



135.0165-XS

Split-seconds addition timer with flyback and rotating countdown bezel

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g

P R E C I S I O N

Addition timer

Addition timer for time measurement with interrupt option.

All models have a diamond-cut, chrome-plated brass case, polished or matt.
All models are protected against shock, dust and water.

The models with lever escapement have additional case seals to give added protection against dust and water.

Calibration

See description on page 40



122.0101-00

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g



122.0401-00

Pin lever, 7 jewels $1/_{10}$ sec. 15 min. Case \varnothing 55 mm, weight 120 g



122.0201-00

Industry model

Pin lever, 7 jewels $1/_{100}$ min. 30 min. Case \varnothing 55 mm, weight 120 g



122.0301-00

Industry model

Pin lever, 7 jewels 1/5 sec. + 1/100 min. 30 min. Case \emptyset 55 mm, weight 120 g

M E C H A N I C S

Addition timer

"Robust 200"

Precision mechanics with mineral glass, metal crown and button. With this special model, Hanhart has taken account of the requirements of industry and craftsmen.

The glass parts are resistant to scratching and acid. The metal buttons and crowns are extremely robust and resistant to solvents and thinners.

Especially suitable for use in the chemical industry, paint workshops or photographic laboratories.

"Allsport"

Universal referee's stop watch.

Scale goes up to 60 min. 20, 35, 45 and 60 min. marked in vellow.

Addition timer with flyback and rotating countdown bezel

The numerals ring on the rotating countdown bezel helps achieve exactly the correct time specifications (seconds) for individual measuring processes. The flyback function allows timing to be started immediately with no time lost from the current measuring process. The large numerals on the white dial make the watch very easy to read.

Industry model

With tough metal crown and metal button.



125.0104-0S

Robust 200

Lever, 7 jewels 1/5 sec. 30 min. Case Ø 55 mm, weight 135 g Mineral glass, metal crown and button



122.6401-00

Allsport

Pin lever, 7 jewels 1/5 sec. 60 min. Case \emptyset 55 mm, weight 120 g



125.0165-XS

Addition timer with flyback and rotating countdown bezel

Pin lever, 7 jewels 1/5 sec. 30 min. Case \varnothing 55 mm, weight 120 g



125.4101-5S

Industry model

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g

125.0101-5S

White dial

P R E C I S I O N

Addition timer

Hours counter

Specially designed for measuring long periods of time, this addition timer is fitted with a 10-hour counter, a black seconds hand and a red, jumping minutes hand.

Fast running timer

1/1nn sec. gradation



126.7701-00

Hours counter

Lever, 11 jewels $^{1}/_{5}$ sec. 60 min. + 10 hours Case \varnothing 55 mm, weight 130 g



126.7801-00

Hours counter

Lever, 11 jewels 1/5 sec. + 1/100 min. 60 min. + 10 hours Case \emptyset 55 mm, weight 130 g



126.4365-50

Hours counter

Lever, 11 jewels $^{1}/_{5}$ sec. 60 min. + 10 hours Rotating countdown bezel Case \varnothing 55 mm, weight 120 g

126.7765-50

White dial



126.0801-00

Fast running timer

lever, 11 jewels $1/_{100}$ sec. gradation, 90 sec. display time Hand revolution 3 sec. Runs approx. 16 min. Case \varnothing 55 mm, weight 125 g

Addition timer

"Mega Minute"

Stopwatch with sprung central minutes hand for measuring up to 60 minutes.

Excellent readability thanks to double-sized minute scale in contrasting colour, and sprung minutes hand

All models have precision lever movements (7 jewels). Shock-protection, additional dust and water protection.

All models have a diamond-cut, chrome-plated and polished brass case.

"Mega Minute" with flyback and rotating countdown bezel

Stopwatch with sprung central minutes hand for measuring up to 60 minutes. The numerals ring on the rotating countdown bezel helps achieve exactly the correct time specifications (seconds) for individual measuring processes. The flyback function allows timing to be started immediately with no time lost from the current measuring process.



185.7901-00

Mega Minute

Lever, 7 jewels 1/5 sec. 60 min. Case \emptyset 55 mm, weight 125 g



185.8001-00

Mega Minute - Industry model

Lever, 7 jewels $1/_{100}$ min. 60 min. Case \varnothing 55 mm, weight 125 g



185-7965-5E

Mega Minute with flyback and rotating countdown bezel

Lever, 7 jewels $1/_5$ sec. 60 min. Case \varnothing 55 mm, weight 120 g



185.4765-5E

Mega Minute with flyback and rotating countdown bezel

Lever, 7 jewels 1/5 sec. 60 min. Case \varnothing 55 mm, weight 120 g

P R E C I S I O N

Addition timer in ABS case

As well as its stopwatches in meta cases, Hanhart also offers more inexpensive addition timers in functional ABS plastic cases. Very lightweight and easy to handle.

Calibration

See description on page 40.



121.0117-00

Pin lever, 1 jewel 1/5 sec. 30 min. Case \emptyset 55 mm, weight 80 g



121.0417-00

Pin lever, 1 jewel $1/_{10}$ sec. 15 min. Case \emptyset 55 mm, weight 80 g



121.0217-00

Industry model

Pin lever, 1 jewel $1/_{100}$ min. 30 min. Case \emptyset 55 mm, weight 80 g



121.0317-00

Pin lever, 1 jewel 1/5 sec. + 1/100 min. 30 min. Case \emptyset 55 mm, weight 80 g

Addition timer in ABS case

"Lumen"

For use in industry and, especially, in laboratories, Hanhart offers two watches in its precision mechanics range with luminous dials.

Once the special dial has been "charged" with light (takes approx. 1 hr.), the face will glow in the dark for approx. 3-4 hours so it is clearly readable. This requires no additional energy or radiating materials. This useful property is achieved by using an innovative plastic material containing light-storing pigments.

The practical ABS case of the "Lumen" has additional dust and water protection.

In a special production process, the glass and the glass fixing ring are moulded together and then firmly screwed to the case

Of course, these watches are also popular with athletes, as they always have been.

"Mega Minute"

Excellent readability thanks to double-sized minute scale and sprung minutes hand.

All models have precision lever movements (7 jewels). Shock-protection, additional dust and water protection. Unlike rival products, all Hanhart "Mega Minute" stopwatches have a sprung minutes hand.

ABS special case ∅ 64 mm. The glass is injected directly into the glass fixing ring, and the ring and case are screwed together.



121.1515-00

Lumen

Pin lever, 1 jewel 1/5 sec. 30 min. Case \emptyset 55 mm, weight 80 g



185.8416-00

Mega Minute

Lever, 7 jewels 1/5 sec. 60 min. Case \emptyset 64 mm, weight 85 g



121.1615-00

Lumen

Pin lever, 1 jewel $1/_{10}$ sec. 15 min. Case \emptyset 55 mm, weight 80 q



185.8616-00

Mega Minute

Lever, 7 jewels $1/_{10}$ sec. 30 min. Case \emptyset 64 mm, weight 85 q

P R E C I S I O N

Crown stopper

All models have a diamond-cut, chrome-plated and polished brass case. All models are protected against shock, dust and water.

These models have additional case seals to give extra protection against dust and water.

Calibration

See description on page 40.



112.0101-00

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 120 g



112.0401-00

Pin lever, 7 jewels $1/_{10}$ sec. 15 min. Case \varnothing 55 mm, weight 120 g



112.0201-00

Industry model

Pin lever, 7 jewels $1/_{100}$ min. 30 min. Case \emptyset 55 mm, weight 120 g



112.0301-00

Industry model

Pin lever, 7 jewels 1/5 sec. + 1/100 min. 30 min. Case \varnothing 55 mm, weight 120 g

M F Н N Α

Crown stopper

"Robust 100"

With this special model, Hanhart has taken account of the require-ments of industry and craftsmen. The glass parts are resistant to scratching and acid. The metal

Especially suitable for use in the chemical industry, paint workshops or photographic laboratories.

"Big 1/₁₀ sec."

A particular speciality of Hanhart precision mechanics is the stopwatch with large-scale 1/10 sec.

"Pulse/breathing rate"

Specially for measuring pulse and breathing rate. Based on 15 pulse beats or 5 breaths.

"Tachy/Telemeter"

This stopwatch with its special tachy- and telemeter scales is ideal for accurate speed control.

1/₅ sec. gradation

Calibration



115.0104-0S

Robust 100

Pin lever, 7 jewels 1/5 sec. 30 min. Case \emptyset 55 mm, weight 135 g Mineral glass, metal crown



115.0501-00

Big $1/_{10}$ sec.

Lever, 7 jewels $1/_{10}$ sec. 5 min. Running time approx. 3 hours Case \emptyset 55 mm, weight 120 g



112.7001-00

Pulse/breathing rate

Pin lever, 7 jewels $1/_{10}$ sec. 30 min. Case \emptyset 55 mm, weight 120 g



115.6701-5S

Tachy/Telemeter

Pin lever, 7 jewels $1/_5$ sec. 30 min. Case \emptyset 55 mm, weight 120 g metal crown

P R E C I S I O N

Crown stopper in ABS case

As well as its stopwatches in metal cases, Hanhart also offers more inexpensive crown stoppers in functional ABS plastic cases with pendant ring. Very lightweight and easy to handle.

Calibration

See description on page 40.



111.0117-00

Pin lever, 1 jewel 1/5 sec. 30 min. Case \emptyset 55 mm, weight 75 g



111.0417-00

Pin lever, 1 jewel $1/_{10}$ sec. 15 min. Case \emptyset 55 mm, weight 75 g



111.0217-00

Industry model

Pin lever, 1 jewel $^{1/_{100}}$ min. 30 min. Case \varnothing 55 mm, weight 75 g



<u>111.031</u>7-00

Industry model

Pin lever, 1 jewel 1/5 sec. + 1/100 min. 30 min. Case \emptyset 55 mm, weight 75 g

Day timer

Modelled on the traditional Hanhart pocket watches, these watches show hours and minutes and have a small seconds.



850.0901-50

Day timer

Movement: ETA 6497/2 Lever, 17 jewels, small seconds Case Ø 55 mm, weight 120 g



850.4901-00

Day timer

Movement: ETA 6497/2 Lever, 17 jewels, small seconds Case Ø 55 mm, weight 120 g

Addition timer in ABS case

"Felix"

"Felix" is a technically simple and robust addition timer in the Hanhart mechanical range. The winding mechanism for the shock-protected pin lever movement is located on the reverse. The robust ABS case comes with a cord for hanging round the neck.



164.3120-00

Felix red

Pin lever, 0 jewels 1/5 sec., display time 10 min. Case \emptyset 55 mm, weight 75 g

164.3119-00

Felix black



164.3419-00

Felix black

Pin lever, 0 jewels $1/_{10}$ sec., display time 5 min. Case \emptyset 55 mm, weight 75 g

164.3420-00

Felix red



174.3219-00

Felix black

Pin lever, 0 jewels 1/5 sec., display time 30 min. Case \emptyset 55 mm, weight 75 g

174.3220-00

Felix red



174.3620-00

Felix red

Pin lever, 0 jewels $1/_{10}$ sec., display time 15 min. Case \varnothing 55 mm, weight 75 g

174.3619-00

Felix black

Addition timer in ABS case

"Amigo"

The "Amigo" is the classic among the more inexpensive addition timers in the mechanical range. The winding mechanism for the shock-protected pin lever movement is located on the reverse. The robust ABS case comes with a cord for hanging round the neck.

"Tristop"

The "Tristop" in Hanhart's mechanical range is designed as a 3-scale stopwatch. This means that the time is even easier to read thanks to a 10-times enlarged $^{1}/_{10}$ sec. display. The winding mechanism for the

The winding mechanism for the shock-protected pin lever movement is located on the reverse. The robust ABS case comes with a cord for hanging round the neck



141.0134-00

Amigo

Pin lever, 1 jewel, 1/5 sec. 30 min. Case \emptyset 55 mm, weight 85 g

141.0135-00

Chrome-plated back



141.0434-00

Amigo

Pin lever, 1 jewel, $\frac{1}{10}$ sec. 15 min. Case \emptyset 55 mm, weight 85 g

141.0435-00

Chrome-plated back



141.6434-00

Amigo

Pin lever, 1 jewel, 1/5 sec. 60 min. Case Ø 55 mm, weight 85 g Referee's watch 20, 35, 45 and 60 min. marked in yellow

141.6435-00

Chrome-plated back



152.8335-00

Tristop

Chrome-plated back Pin lever, 7 jewels, 1/₁₀ sec. 30 min. Case Ø 55 mm, weight 85 g

Selection criteria

Hanhart has been one of the leading producers of electronic stopwatches since 1976. Initially, the company made them with LED displays (light diodes), but since 1982 it has been using LCD technology. This kind of display brings significant benefits in terms of information content and energy consumption, and so increases running times.

Since 1989, Hanhart has been using "chip on-board" technology, due to the smaller and more ergonomic case designs combined with much increased functionality. It brings with it significant improvements in quality.

Brief description of the functions

Start/stop: individual time measurement with no interruption.

Addition: time measurement with interrupt option.

Split: split time measurement while timing continues.

Dual measurement: for measuring two times in quick succession

Lap: circuit or section times. After each stop, a new measuring process begins automatically at time "0"

Short lap: shortest lap time.

Countdown: count down for a freely programmable period of time, at "0" a signal sounds.

Count-up: incremental counting/ stopwatch function

Autorepeat: automatic repeating at the end of the programmed time.

Pacer: acoustic pace-setter, freely adjustable

Memory: memories which can be retrieved separately after the time recording has finished.

Reset: zero-setting.

Memory reset: deletes memory.

System reset: complete resetting of the stopwatch functions.

24-month Hanhart guarantee.

Start/Stop, Split and Lap timing are the most important operations when using a stopwatch. Depending on the model, these can be carried out using 1 or 2 buttons.



1-button operation

All the above operations are carried out using one button. No accidental mistakes!



2-button operation

Start/Stop and Split or Lap are operated using two separate buttons.

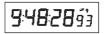
Temperature range

All Hanhart electronic stopwatches work in a temperature range from about -15° to +55°C.

Temperature range for "Labor 1, 2, 3"

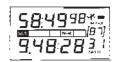
Ambient temperature from +5°C to +40°C, storage temperature from -20°C to +70°C.

Stopwatches with relatively few functions mainly use one-line displays, while multifunction stopwatches usually use multi-line displays.



One-line display

Large numerals and symbols. Clear display!



Multi-line display

Where there is a wide range of functions, more information is shown on the display.

Water protection

The watches shown in the table below as having water protection "yes" have additional seals and are therefore resistant to sprayed or splashing water. The watches marked as "water resistant" are tested by Hanhart at a pressure of 2 bar. They remain undamaged after long periods in water up to 10 m deep.

In order to keep the watches waterresistant over many years, they should be serviced by a specialist approx. every 2 years.

Model	Catalogue page	+/- sec month	Time measuring buttons	Display times	Battery change warning	Water protection
Stratos 2	31	30	2	1		
Stopstar 2	31	30	2	1		
Profil 1	30	30	2	1		yes
Profil 25	30	7	2	1.5		yes
Sprint	31	30	2	1		
Modul 1	26	14	1	1.5	•	yes
Modul 3	24	14	1	1.5	•	yes
Magma 10	26	7	1	2		yes
Magma Pro	27	7	1	2		yes
Delta E 100	28	7	2	2.5	•	water protected
Delta E 200	28/29	7	2	2.5	•	water protected
Spectron	37	7	2	2.5	•	water protected
Accord 1	38	14	1	1	•	yes
Accord 2	38	14	1	1	•	yes
Compact	38	30		1		
Labor 3	39	30		3		
Labor 2	39	30		1		
Labor 1	39	30		1		

E C T R O N I C S



 • • (•) • 65 • auto • 1/₁₀₀ min. + 1/₁₀₀ sec. (•) • 60 • 1/₁₀₀ min. 	Addition	Split	Lap	Short lap	Memory	Countdown with signal	Count-up after countdown	Auto- repeat	Time	Date	Special features
Can be calibrated 25 60 00 00 00 00 00 00 00 00 0	•	•									
• • • 60 • auto • With external connector • • • 10 • auto • Pacer and display light also with external connector • • • 65 • auto • Pacer, also with external connector • • • 65 • auto • Pacer, also with external connector • • • 65 • auto • 1/100 min. + 1/100 sec. (•) • 60 • 1/100 min. Printer connection for Pri	•	•									
60	•	•									Can be calibrated
60	•	•	•		25				•		
● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	•	•	•						•	•	
• • • 10 • • • 10 • • • 10 • • • • 10 • • • • 10 • • • • 10 • • • • • 10 • • • • • • • • • • • • • • • • • • •	•	•	•		60				•	•	
• • • • • • • • • • • • • • • • • • •	•	•	•		60	•		auto	•	•	With external connector
also with external connector	•	•	•	•	10				•	•	
• • • 65 • • • 65 • • • 65 • • • • 65 • • • • 65 • • • • 65 • • • • • • 65 • • • • • • • • • • • • • • • • • • •	•	•	•	•	10	•		auto	•	•	Pacer and display light
● ● ● 65 ● auto ● Pacer, also with external connector auto ● 1/100 min. + 1/100 sec. (●) ● 60 ● 1/100 min. Printer connection for Pri ● ● 60 ● 1/100 min. Printer connection for Pri ● ● 60 ● 1/100 min. Printer connection for Pri ● ● 60 ● 1/100 min. Printer connection for Pri ● 60 ● 60 ● 1/100 min. Printer connection for Pri ● 60 ● 60 ● 60 ● 60 ● 60 ● 60 ● 60 ● 6											also with external connector
 ● ● (●) 65 ● 60 ● 60 ● 1/100 min. + 1/100 sec. (●) ● 1/100 min. Printer connection for Pri ● 1/100 min. Printer connection for Pri 	•	•	•	•	65				•	•	
● ● 60 ● 1/ ₁₀₀ min. ● ● 60 ● 1/ ₁₀₀ min. Printer connection for Pri ● ● ● ● ●	•	•	•	•	65	•		auto	•	•	Pacer, also with external connector
 • • 60 • • 1/₁₀₀ min. Printer connection for Pri • • • • • 	•	•	•	(●)	65	•		auto	•	•	¹/ ₁₀₀ min. + ¹/ ₁₀₀ sec. (●)
• • • •		•	•		60				•	•	1/ ₁₀₀ min.
• • •		•	•		60				•	•	1/ ₁₀₀ min. Printer connection for Printo
	•					•			•		
• • • •						•	•		•	•	
•						•	•		•	•	
						•					

Memory stopwatches 1-button operation

"Modul 3"

Measuring range: 1/₁₀₀ sec.
LCD display: 1.5 lines
Top line: 7-digit
Bottom line: 2 digits for memory display

23 hrs., 59 min., 59.99 sec. 60 per time type 82 x 61 x 28 mm approx. 90 g AA 1.5 V Memories: Size: Weight: Battery: Battery life:

Functions:
Start/Stop/Reset
Split/Lap/Addition – all three times
can be switched at any time
Split time can be set in advance of
the actual time

60 memories: for Split/Lap/Addition

If a "Printo" is purchased at a later date, the "Modul 3" can be

"Modul 3"

Supplied with protective pouch and cord.



262.1762-00

Modul 3 $1/_{100}$ sec.



262.1763-00

Modul 3 $1/_{100}$ sec. With light barrier connection

Thermal printer

"Printo" thermal printer

Scope of delivery as for the "Printo" set without the "Modul 3" stopwatch. 16 digits per line, approx. 8000 printouts per battery set.

-5°C to +50°C 120 x 85 x 35 mm approx. 200 g 4 x AAA, 1.5 V

- Two basic functions:
 a) The memory of the "Modul 3" is released again after outputting to the printer (to record times of more than 60 participants).
- is preserved. (Advantage: memo-ry content can be printed out more than once with different time types.)

"Printo" set

of paper for the printer, spare batteries and connecting cable.

The "Modul 3" (60 memories) is connected to the "Printo" printer by a connecting cable (plug-in connection). The data recorded by

Calibration



Multi-function and memory stopwatches 1-button operation

"Modul 1"

Measuring range: 1/₁₀₀ sec. LCD display: 1.5 lines Top line: 7-digit Bottom line: 2-digit

Bottom line: 2-digit
Numeral height: 6 mm
Display range: 9 hrs., 59 min., 59.99 sec.
Internally: 23 hrs., 59 min., 59.99 sec.
Memories: 60 per time type
Size: 82 x 61 x 28 mm
Weight: approx. 90 g
Battery: AA, 1.5 V
Battery life: approx 2 years Battery: Battery life:

Functions: Start/Stop/Reset Split/Lap/Addition – all three times can be switched at any time Separate system and memory reset Time of day, date

60 memories:

"Magma 10" and "Magma Pro"

displays for easy reading. Thanks to 1-button operation, there can be no accidental mistakes during time measurement. With 10 memories each, these two stopwatches are highly versatile.



260.1760-00

Modul 1 $1/_{100}$ sec.



236.1950-00

Magma 10 $1/_{100}$ sec.

"Magma 10" and "Magma Pro" have a robust, water-resistant ABS case and a very clear display and come with a pouch and cord.

LCD display:

7-digit
Date, time,
countdown
pace-setter with
"Magma Pro"

Top line: Bottom line:

59 min., 59.99 sec. 9 hrs., 59 min., 59.99 sec. 10 per time type 82 x 61 x 28 mm approx. 90 g AA, 1.5 V

"Magma 10"

Functions:

Split time can be set in advance of the actual time
Time of day, date

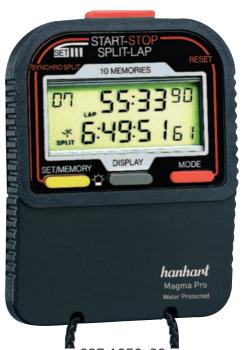
10 memories: 10 each for Split/Lap/Addition (the first 9 times + the last measured time)

"Magma Pro"With LCD light

Functions:

Split time can be set in advance of the actual time
Pacer (acoustic beat, 1-300 beats/min.)
2 different countdowns (interruptible and non-interruptible) during measuring)
Split/Lap and time can be alternated
during measurement
Date

10 each for Split/Lap/Addition (the first 9 times + the last



237.1950-00

Magma Pro $1/_{100}$ sec. With LCD light



237.1952-00

Magma Pro $1/_{100}$ sec. With light barrier connection

Multi function and memory stopwatches 2-button operation

"Delta E 100" and "Delta E 200"

With its electronic hand-held stopwatch range "Delta E 100" and "Delta E 200", Hanhart is introducing a new generation of high-performance time measuring instruments. The Delta series uses Hanhart. These stopwatches are water-resistant.

2.5 lines
6-digit + battery
status display
7-digit
Function window
for: Lap, Short
Lap, normal

pacer
2-digit memory
display
Numeral height: 7 mm/5 mm

59 min., 59.99 sec. 9 hrs., 59 min., 59.99 sec. 65 per time type 90 x 60 x 19 mm approx. 85 g AAA, 1.5 V Memories: Size: Weight: Battery: Battery life:

Calibration



245.1945-00

Delta E 100

245.1944-00

Delta E 100

Black case



245.1946-00

Delta E 200

Ε Τ R 0 Ν

"Delta E 100"

Functions:
Start/Stop/Reset
Addition/Split/Lap/Short Lap
Split time can be set in advance of
the actual time Time of day
Split, Lap, Short Lap and time can
be alternated during measurement
Date

65 memories:

"Delta E 200"

Functions: Start/Stop/Reset Addition/Split/Lap/Short Lap Split time can be set in advance of the actual time
Pacer (1-300 beats/min.)
Countdown
Countdown and stopwatch can be used at the same time
Time of day
Split, Lap, Short Lap and time can be alternated during measurement

65 memories: with evaluation, fast search



Delta E 200 With light barrier connection

Basic function stopwatch 2-button operation

"Profil 1" and "Profil 25"

All models have a robust, water-protected ABS case and a clearly readable LCD display, and they come with a protective pouch and

Numeral height: Display range:

7-digit + 2 for Event Counter 8 mm 9 hrs., 59 min., 59.99 sec. 82 x 61 x 28 mm approx. 90 g Battery: Battery life:

Functions of "Profil 1": Start/Stop/Reset – Addition/Split/Dual measurement

19.2 02.01 a version that can be calibrated. Your own Office of Weights and Measures can arrange this.

Functions of "Profil 25":

25 memories:

window for Split, Lap and normal

Calibration



220.1721-00

Profil 1 $1/_{100}$ sec.



225.1721-00

Profil 25 $1/_{100}$ sec.



Profil 1 $1/_{100}$ sec. Can be calibrated F Τ 0 N R

"Sprint"

The "Sprint" is a very lightweight and easy to use stopwatch. Here, too, the normal time and date can be called up.

6-digit 5 mm 59 min., 59.99 sec. 55 x 58 x 16 mm approx. 35 g Numeral height: Display range: Size: Weight:

Functions:

Addition/Split/Dual measurement Time of day: (2x12 hrs. a.m./p.m.) Date

Battery life: approx. 2 years.

"Stopstar 2"

Measuring range: 1/₁₀₀ sec. LCD display: 7-digit Numeral height: 7 mm

9 hrs., 59 min., 59.99 sec. 82 x 61 x 28 mm approx. 70 g AA, 1.5 V Size: Weight: Battery: Battery life: approx. 2 to 5 years

Functions:

Start/Stop/Reset – Addition/Split/Dual measurement

"Stratos 2"

Measuring range: 1/₁₀₀ sec.
LCD display: 7-digit
Numeral height: 6.5 mm
Display range: 9 hrs., 59 min.,
59.99 sec.
Size: 66 x 70 x 21 mm
Weight: approx. 62 g
Battery: button cell SR 54

Functions: Start/Stop/Reset – Addition/Split/Dual measurement



280.1680-00

Sprint

 $1/_{100}$ sec.

280.1681-00

Sprint

Red case





211.1710-00

Stopstar 2

 $1/_{100}$ sec.

211.1712-00

Stopstar 2

Black case

205.1705-00

Stratos 2

 $1/_{100}$ sec.

INDUSTRY AND LABORAT



RY TIME MEASUREMENT

Desktop timers

"Mesotron"

With the "Mesotron", Hanhart is offering a clearly readable, quartz-controlled analogue table-top/wall-mounted timer.

approx. 375 g AA, 1.5 V Battery:

Functions:

Start/Stop/Reset – Addition – Flyback

Calibration

24-month Hanhart guarantee

"Mesotron"

+/- secmonth	14
Time measuring buttons	2
Battery change warning	•
Addition	•



Mesotron

 $0-60 \text{ sec.} + 1/_{100} \text{ min.}$

DUSTRY AND LABORAT

Desktop timers

"Prisma 200" and "Prisma 400"

interval up/down timers for use in industry, laboratories and schools, and for sport and domestic pur-poses.

Numeral height: Display range: selectable

Battery:



626.2626-00

Prisma 400

Blue case 4 timers

Selectable: $1/_{10}$ sec. or $1/_{100}$ min.

ORY TIME MEASUREMENT

"Prisma 200"

2 timers

Selectable: $1/_{10}$ sec. or $1/_{100}$ min.

Functions:

Start/Stop/Reset –
Addition – Flyback – Countdown
with adjustable acoustic alarm
2 timers, fully programmable, with
start/stop activation either together
or separately
Repeat, manual or automatic
Time of day

"Prisma 400"

4 timers

Selectable: 1/1n sec. or 1/1nn min.

Functions:

Start/Stop/Reset – Addition – Flyback – Countdown with adjustable acoustic alarm 4 timers, fully programmable, with start/stop activation either together or separately Repeat, manual or automatic Time of day

Calibration

See description on page 40.

24-month Hanhart guarantee

"Prisma 200" and "Prisma 400"

+/- secmonth	
Time measuring buttons	2
Display lines	2
Battery change warning	•
Addition	
Lap	
Countdown with signal	•
Autorepeat	•
Time	•
Adjustable acoustic signal	



626.2625-00

Prisma 400

White case
4 timers

Selectable: $1/_{10}$ sec. or $1/_{100}$ min.



625.2626-00

Prisma 200

Blue case 2 timers

Selectable: $1/_{10}$ sec. or $1/_{100}$ min.



625.2625-00

Prisma 200

White case 2 timers

Selectable: $1/_{10}$ sec. or $1/_{100}$ min.

N D U S T R Y A N D L A B O R A T

Industrial timing $1/_{100}$ min.

"Robotimer"

- be recorded with no loss of data.

 Always ready for use thanks to use of reliable mechanical stopwatches.

201.6683-00

Robotimer

3 crown stoppers Lever, 7 jewels for 3 x separate times plus 1 addition timer Lever, 11 jewels for total time 10 hours

923.0748-00

Item counter



RY TIME MEASUREME



Spectron

 $1/_{100}$ min. + $1/_{100}$ sec.



"Spectron"

LCD display: Top line:

display
7-digit
for Lap/normal

Memory display: Numeral height:

9999.99 min. 99999.99 min. 82 x 61 x 28 mm 85 g AAA, 1.5 V approx. 5-7 years

Size: Weight: Battery: Battery life:

Start/Stop/Reset –
Split/Lap/Addition
Split and Lap can be read at the same time
Time of day, date

65 memories:

Functions if switched to 1/₁₀₀ sec.
Technical data as for the "Delta E 200"

Split time can be set in advance of the actual time
Countdown
Countdown and stopwatch can be used at the same time
Time of day, date

Calibration



DUSTRY LABORAT Ν AND

Industrial timing 1/₁₀₀ min.

"Accord 1"

Measuring range: 1/₁₀₀ min. LCD display: 1.5 lines Top line: 7-digit Memory display: Bottom line: 2-digit

Size:
Weight:
Battery:
Battery life:
Functions:

memory reset
Time of day, date
60 memories: for Split and Lap

"Accord 2"

Short period timers $1/_1$ sec.

"Compact"

LCD display:

23 hrs., 59 min., 59 sec. 64 x 60 x 16 mm approx. 40 g button cell SR 44 Battery: Battery life:

Functions:

Countdown with alarm and repeat Time of day (24 hrs.) This model comes with a button cell battery (SR 44). Battery life: approx. 1-2 years. The timer has a clip for hanging or



265.6765-00

Accord 1 $1/_{100}$ min.

265.6766-00

Accord 2 $1/_{100}$ min.



610.6700-00

"Printo"-Set

"Accord 2" + "Printo" Describtion of "Printo" printer see page 25



291.4690-00

Compact $1/_1$ sec.

RYTIMF MFASURF М N

Short interval timers $1/_1$ sec.

"Labor 1, 2, 3"

"Labor 1" is the model with a programmable countdown. The pre-set time can be called up

Size: Weight:

Functions:

"Labor 2" offers two programmable countdown or count-up times or a normal time display. 2 timers in one device.

LCD display: 6-digit

Functions:

Count-up

"Labor 3" has a triple display for three separate, programmable countdown or count-up times. The "Labor 3" also displays the

Numeral height: 8 mm/6 mm
Display range: 99 hrs. 59 min.,
59 sec.
Size: 83 x 70 x 22 mm

Functions:

These models come with a button cell battery (SR 44).
Battery life: approx. 1-2 years.

All timers have a clip for hanging or standing them up and a magnet.



292.4492-00

Labor 1 $1/_1$ sec.



293.4693-00

Labor 2 $1/_1$ sec.



294.4994-00

Labor 3 $1/_{1}$ sec.

ADDITIONAL DEVIC

"Systema"

The "Systema" clipboard is a well-designed, useful item to help with time-recording. The top section also has an interchangeable part for fitting an electronic stopwatch (with a clip) or a mechanical one (with a holding bracket) (see photo), so that both right- and left-handed people can use the stopwatch in an ergonomically correct position.

"Systema" has an integral penholder and a clamp for an A4 pad of paper. The device is easy to hold using the carry strap or handle.

Colour: light grey

Size: 400 x 330 x 18/11 mm

Weight: approx. 770 g

Stopstand

For mechanical stopwatches in metal or plastic cases (not incl. stopwatch).

Calibrating stopwatches

The calibration of measuring devices (including stopwatches) is becoming ever more important in the light of the monitoring of test equipment for compliance with ISO 9000 ff.

Hanhart offers a calibration service which includes calibration of watches and a CERTIFICATE of their accuracy.

Calibration certificates can be issued for the following watches

- All mechanical stopwatches except for the "Felix" range.
- The electronic stopwatches "Delta", "Modul", "Accord", "Profil", "Magma", "Stopstar", "Spectron", "Mesotron", "Prisma".



901.0677-90

Systema

Basic board excl. stopwatch holder





901.0678-10

Systema

With holding bracket for mechanical metal stopwatches (not incl. stopwatch)



901.0678-30

Systema

With clip for electronic stopwatches (not incl. stopwatch)



905.0698-40

Holding bracket

Metal holding bracket for mechanical stopwatches (not incl. backing plate)



905.0752-20

Plastic clip

For electronic stopwatches.
Suitable for Stopstar, Profil, Accord,
Magma 10 + Magma Pro, Modul, Delta,
Spectron (not incl. backing plate)



Stopstand

For metal cases

905.0755-90

Stopstand

For plastic cases Cal. 111 + 121



Metal mounting plates for mechanical stopwatches

es can be easily fitted to the car dashboard using these specially made mounting plates.

Clever mechanics make handling stopwatches easy as you fit them and remove them.

by sturdy little supports with rub-ber pads and a fixing element with spring-loaded bearings. The stop-watches are pushed gently into the sprung mounting.

Dimensions of metal mounting plate:

Single plate

Double plate Size: 140 x 62 x 3 mm

Triple plate

Leather clipboard

With paper holder and dashboard mounting plate for 3 mechanical





901.0101-00

Plate for 1 watch

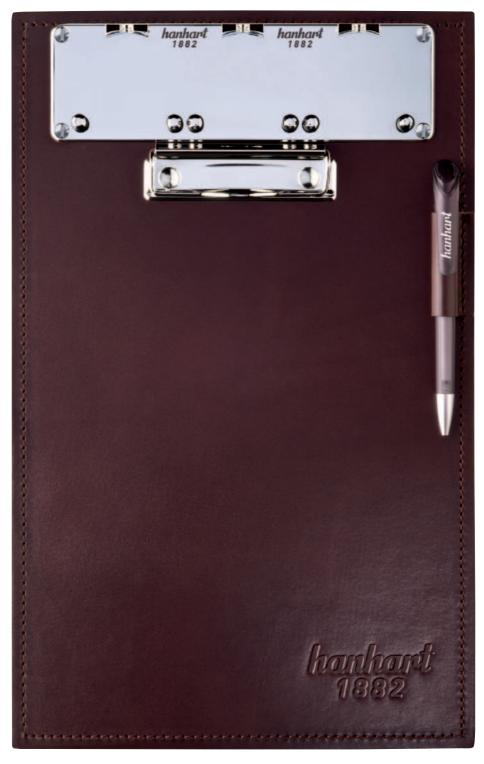
901.0201-00

Plate for 2 watches

901.0301-00

Plate for 3 watches





901.0301-60 Leather clipboard

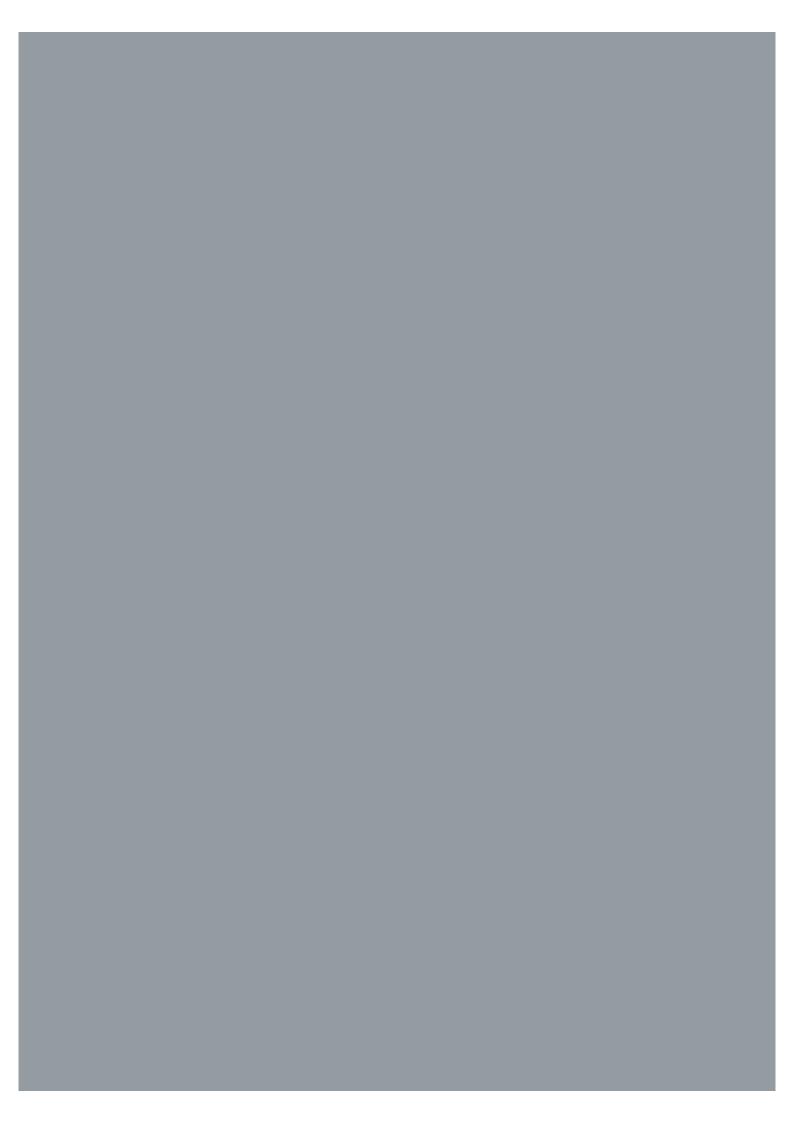


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