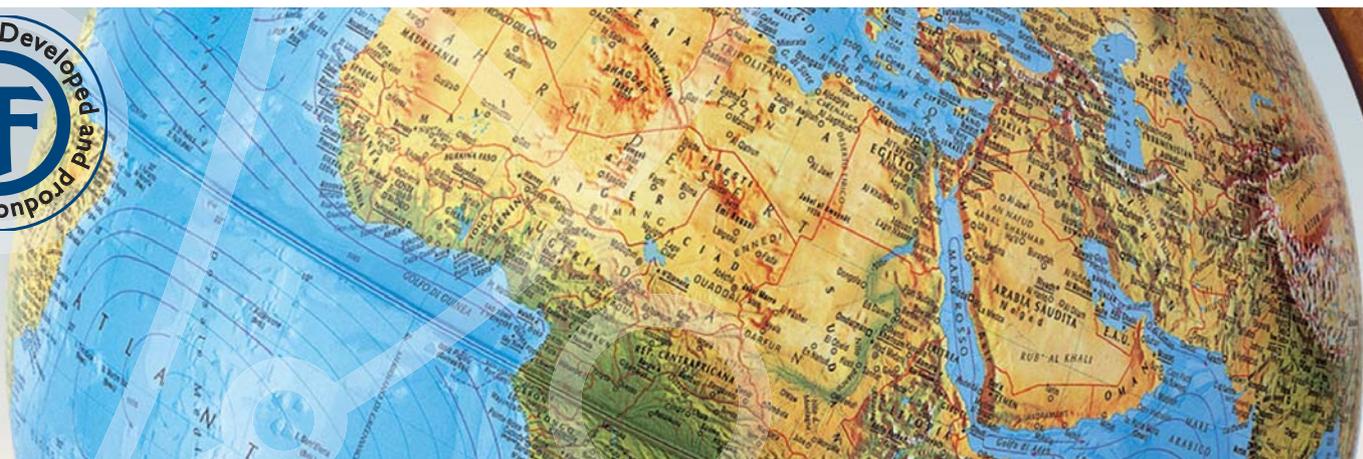


EXPORT

# exportmail

biology | chemistry | physics | science

OCTOBER 2012



Eurofysica likes to show you interesting apparatus and instruments selected for export. In total we have a range of more than 4000 different products for physics, biology and chemistry mainly used in secondary education.

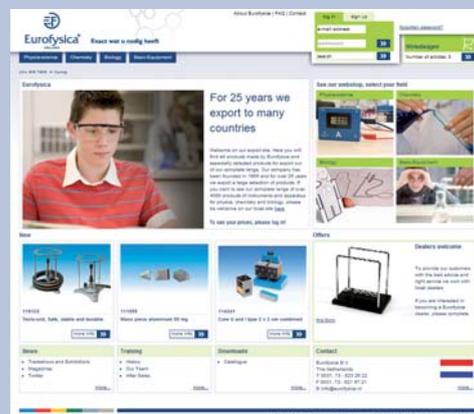
For 25 years we export a selection of these items, which are developed and produced in our own company. We can offer you these items in all quantities and with an interesting price. Visit our website [www.eurofysica.com](http://www.eurofysica.com) to discover more products and details.

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We are present at the WorldDidac 2012 in Basel from October 24- 26th. You will find us in Hall 1, Stand 44. Please visit us there or contact us for more information. We are happy to help you.



**Eurofysica**<sup>®</sup>  
HOLLAND

Exact wat u nodig heeft

## TECLU-UNIT

Safety first! Make sure your experiments do not end with injuries. Our Teclu-unit consists of a heavy metal base with stainless steel tripod and teclu burner. Improves safe working and easy storing of the complete unit including the gas tube. Height 21 cm.

118123





## **INCLINED PLANE DYNAMICS TRACK**

Made of natural anodised aluminium.

- 118520** 60 cm without scale
- 118521** 100 cm with scale

## **TROLLEY**

Low friction trolley with rod to fit extra weights. With holes for connecting cord and buffer with pin.

**111300**



## **DYNAMICS TROLLEY WITH**

### **MOTOR-PROPELLER**

Low-friction kart with motor and propeller, battery powered. Designed for constant force experiments. Can be used in combination with windscreen-kart 111306.

**111305**

### **MOTOR AND SOLAR CELL**

Low-friction kart with motor and solar cell.

**111307**

### **WINDSCREEN**

Low-friction kart with windscreen. Designed for experiments with air-resistance.

**111306**



## **ACCESSORIES FOR DYNAMIC TRACK**

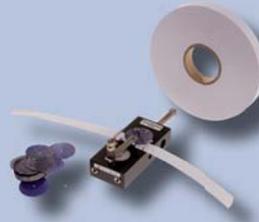


- 111301** Buffer with pin.
- 111303** End stop with pin, for fixing pulley with pin, ticker tape timer and buffer.
- 122150** End stop with pin, for fixing pulley with pin (low) and buffer.
- 111302** Pulley with pin

## **TICKER TAPE TIMER**

Sturdy model with hole and rod for mounting on stand. Comes with a roll of paper 18 mm and package of carbon paper discs.

**111256**



## **LEVER ARM WITH RIDER**

Fitted with ball bearing pivotal point.

- 111207** Lever arm
- 111208** Rod for lever arm



## **TIMER DIGITAL**

Suitable for light gates and mechanical switches.

- Range: 0 - 88888,888 sec
- Dimensions: 50 x 80 x 55 mm
- Power: 5-14 V DC

**111152**

## **LIGHT GATE**

Universal applicable light gate with rod and 4mm junction boxes. Effective size between the legs is 40 mm.

**111157**

## **LOW FRICTION PULLEY ON ROD**

The pulley has a circumference of 16 cm, with 10 holes for time and speed measurements.

**111241**



## **SLOTTED CYLINDER MASS SETS**

Solid brass nickel finish. The disk weights can be interchanged.

- 111211** Set total 50 grams
- 111209** Set total 150 grams
- 111212** Set total 250 grams



## **TENSION SPRING**

Made of stainless steel and equipped with pointer.

- 111224** Spring 4 N/m
- 111223** Spring 7,5 N/m
- 111222** Spring 10 N/m
- 111238** Spring 25 N/m
- 111239** Spring 50 N/m



## **TENSION SPRING IN HOUSING**

Tension spring in transparent housing for around reading. Total length 30 cm, length scale 100 mm.

- 111290** Tension spring 10 N/m
- 111291** Tension spring 20 N/m
- 111292** Tension spring 50 N/m



**DYNAMOMETERS WITH LINEAR SCALE AND METAL HOUSING**

With zero point setting and adjusting screw. Elongation protection and hook for rod stand connection. Total length 19 cm, length graduation scale 60 mm.



- 111034 Dynamometer 1 N
- 111035 Dynamometer 5 N
- 111036 Dynamometer 10 N

**DYNAMOMETER WITH TRANSPARENT HOUSING**

With clearly visible scale and zero point setting. Elongation protection and hook for rod stand connection. Each range has its own colour code. Total length 30 cm, graduation scale: 100 mm



- 111281 Dynamometer 1 N
- 111282 Dynamometer 2 N
- 111284 Dynamometer 5 N
- 111285 Dynamometer 10 N
- 111286 Dynamometer 20 N
- 111287 Dynamometer 100 N

**DYNAMOMETER ROUND**

Round disc with 175 mm diameter with ball bearing pulley. Settings independent of the pulling direction. Equipped with rod for stand mounting, suitable for mounting on magnetic board.

- 111274 Dynamometer round 1 N
- 111275 Dynamometer round 2 N
- 111276 Dynamometer round 2 N



**SHOOT AND FALL APPARATUS**

To demonstrate that two balls with the same mass will simultaneously reach the floor after being shot and freely dropped from the same height. Comes with two stainless steel balls of 16 mm diameter.

111226



ELECTRICITY

**LAMINATED DOUBLE U-CORE**

With 3 x 3 cm legs with base and rod with screw for connection of both parts.

114360

**COILS 3 X 3 CM**

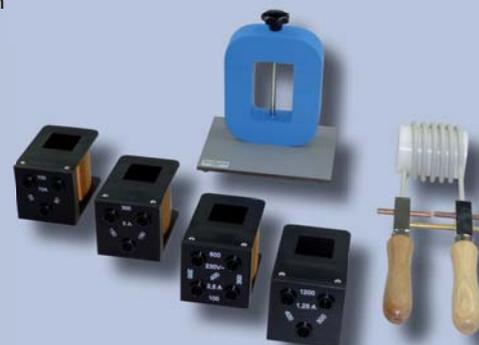
With very sturdy house, provided with 4 mm terminal sockets.

**COIL WITH 6 HEAVY TURNS**

Secondary coil, to make a model of a welding transformer.

114372

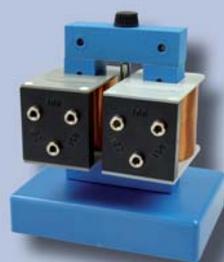
	Number of turns	Amperage
114373	100-50-50	10 A
114374	300-150-150	5 A
114376	600-400-300-200	2.5 A
114378	1200-800-400	1.2 A



**LAMINATED U- AND I-CORE**

With 2 x 2 cm legs. Complete with wing-nut and plastic base.

114341



**COILS 2 X 2 CM**

With very sturdy house, provided with three 4 mm sockets.

	Number of turns	Amperage
114351	200-100-100	3 A
114352	300-150-150	2 A
114354	600-400-200	1 A

**DIGITAL STUDENTS METERS**

Easy to use digital student meters without knobs or switches. After inserting a 4 mm plug the meter switches on and is ready for use.

- Input resistance : > 100 mOhm
- Accuracy : 0,5%
- Size : 120 x 80 x 25 mm

- 114005 Voltmeter 200 V / 0,1 V
- 114006 Ampere meter 20 A / 0,01 A protected up to 20 A
- 114004 Ampere meter 2 A / 0,001 A protected up to 4 A



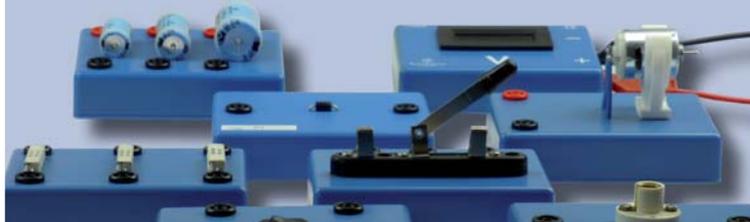
# ELECTRICITY

## ELECTRICITY COMPONENTS ON BASE

Mounted on a blue plastic base 90x120 mm with 4 mm sockets

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>I14200</b> NTC resistance     | <b>I14288</b> Relais              |
| <b>I14206</b> NPN transistor     | <b>I14289</b> Potentiometer       |
| <b>I14207</b> Capacitor, 3 types | <b>I14292</b> Resistance, 3 types |
| <b>I14209</b> Diode              | <b>I14298</b> Switch              |
| <b>I14210</b> LED                |                                   |

For more components see our website

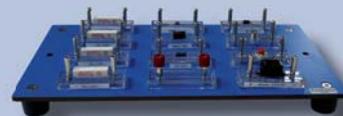


## CIRCUIT ELEMENTS WITH 4 MM PINS

Mounted on plastic profile with 4 mm plug pins and jacks on a center distance of 50 mm. Can be used on student experiment board I18400

- |                                 |
|---------------------------------|
| <b>I14250</b> Resistance 10 ohm |
| <b>I14263</b> Capacitor         |
| <b>I14265</b> Relais            |
| <b>I14270</b> LDR resistance    |
| <b>I14276</b> NPN transistor    |
| <b>I14277</b> Diode             |
| <b>I14280</b> Lamp holder       |
| <b>I14282</b> Switch            |

For more components see our website



## CURRENT BALANCE



With 4 interchangeable printed conductors (1, 2, 4 and 8 cm). The holder is turnable in a horizontal and vertical position. Complete with a set of 6 removable permanent magnets in holder. The maximum current is 5A.

**I14388**

## TEST LEADS 0,75 MM<sup>2</sup>

Equipped with stackable and unbreakable plugs (top plug) and spring pins (4 mm diameter). Available in black, red, yellow, green and blue.

- |  |
|--|
| <b>I14800-I14803</b> Test leads 25 cm  |
| <b>I14810-I14813</b> Test leads 50 cm  |
| <b>I14820-I14823</b> Test leads 100 cm |



# MAGNETISM

## THREE DIMENSIONAL MAGNETIC FIELD MODEL

A perfect and sturdy working model to show a three dimensional magnetic field. Size 10 x 12 cm.

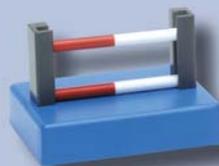
**I14524**



## FLOATING MAGNETS HOLDER

For placing round bar magnets (I14502) floating. Mounted on a plastic base 90 x 120 mm.

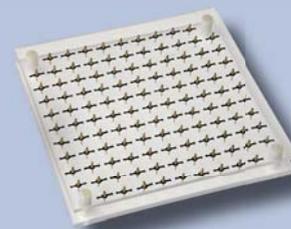
**I14503**



## MAGNETIC MODEL FIELD

Magnetic lines of force model, cubic I17 magnetic needles with pins between two transparent plates.

**I14527**



# ELECTROSTATICS

## VAN DE GRAAFF GENERATOR, 200 KV

According to Van der Graaff. Equipped with rotating rubber band and conductor sphere with 4 mm socket. Very suitable as power supply in electrostatics. Comes with English manual. Technical data:

- |                  |                  |
|------------------|------------------|
| Output Voltage   | : 200,000 volts  |
| Conductor sphere | : 20 cm diameter |
| Height           | : 45 cm          |
| Connection       | : 230 V          |

**I14457**



## ELECTROSCOPE

Round model with clear pointer. Complete with sphere conductor and two condenser plates. Ideal for student's experiments. Diameter 13 cm, total height 20 cm.

**I14482**



**ELECTROSCOPE WITH GRADUATION SCALE**

With a large sensitivity, in a metal casing with a glass front and -back as well as a graduation scale. Designed with a 4 mm socket. Complete with conductor plate and a ball conductor on a pin. Dimensions: 210 x 170 x 100 mm.

**114483**



**ELECTROSCOPE**

Electroscope simple open model. Consists out of aluminium holder with pointer. Mounted on a plastic base 90 x 120 mm.

**114484**



PROPERTY OF GASES

**BOYLE'S LAW APPARATUS**

This transparent apparatus gives the right answer. It shows the value and change in volume and pressure at once, even when you turn from plus to minus 1 N/cm<sup>2</sup>. Cilinder 300 x 40 mm. Meter scale 100 mm.

**111555**



**BAROSCOPE COMPLETE**

With glass balloon diameter 6 cm. In combination with a vacuum bell jar it is possible to demonstrate the mass of air.

**111526**

**MAGDEBURG HEMISPHERES**

It works perfect, made of massive cutted aluminium with a diameter of 10 cm.

**111523**



**HAND VACUUM PUMP**

Hard plastic disc diameter 25cm. Complete with outlet valve and sunken hose nipple. Piston fitted with two O-rings and back stroke valve. High end vacuum

**111510**



**AIR PUMP PLATE**

Solid plate with diameter of 240mm. Complete with tap, hose nipple and vent valve.

**111515** Air pump plate

**111516** Air pump plate rubber sheet



**ROTARY VANE VACUUM PUMP**

Two stage rotation pump in low noise metal housing (approx. 48 dB) with handle. With power-switch and 1.5 m mains cable with plug. Air outlet and inlet 10 mm nozzle. With built-in inlet filter and gas ballast valve. Power supply 230 V AC, vacuum <math>< 70 \cdot 10^{-4}</math> mBar, flow 50 l/min.

**111512**



PROPERTY OF LIQUIDS

**OSMOSE APPARATUS**

Two plexiglass cylinders with end and rubber O-ring. Provided with semi permeable membrane and 2 glass tubes.

Size: 10 x 8 x 6 cm

**111417**



**PASCAL'S APPARATUS - HYDROSTATIC PRESSURE**

With 4 interchangeable vessels of different shapes. Performed on an aluminum base with pointer for liquid level and fluid pressure.

**111410**



## EXPORT HITS

### CAPILLARY TUBES

Interconnected capillary tubes of different internal diameter. Made entirely of glass, mounted on removable plastic base plate.

**111402**

### COMMUNICATING VESSELS

Communicating vessels. Interconnected vessels of different shapes. Vessels made of glass mounted on a plastic base.

**111400**



### BUCKET AND CYLINDER OF 'S GRAVENSANDE

Plastic bucket and cylinder of 's Gravensande. Fits perfect together. Complete with top and bottom hook. To demonstrate Archimedes Law.

**111414**



## HEAT

### CALORIMETER JOULE

Calorimeter complete with lid, second lid with two resistors respectively 2.5 Ohm and 5 Ohm, stirrer and thermometer with high reading out.

**111658**



### THERMOMETER MODEL

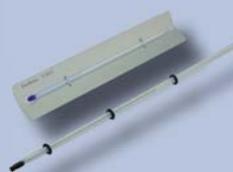
Thermometer capillary without scale, fixed on a metal frame, writable and washable.

**111610**

### THERMOMETER MODEL

Glas capillary without scale with O-rings, length 300 mm, diameter 7 mm.

**111615**



## CHEMISTRY

### PICO-GC GAS CHROMATOGRAPH

The PICO-GC Gas Chromatograph is a simple, lowcost gas chromatograph for educational use. Operates at room temperature and uses air from a membrane-pump as carrier gas. Comes with a standard non-polar column. The PICO-GC is designed to operate with all standard computer based measuring systems such as Labquest, Coach or Science Workshop. Comes with membrane-pump and all accessories needed.

**116300**



### RADIATION TUBES

For experiment with heat radiation and absorption. Set of 3 metal tubes black, white and chrome plated. Complete with rubber stoppers for thermometer

(111603)  
Length 150 mm.  
Ø: 32 mm.

**111636**



### PARABOLIC MIRROR

Made of heavy polished metal. Complete with rod for stand fixation. Enables placement of a thermometer. Suited for reflection of thermal beams, light bundles and sound waves.

**111645**

Parabolic mirror 30 cm

**111646**

Parabolic mirror 46 cm

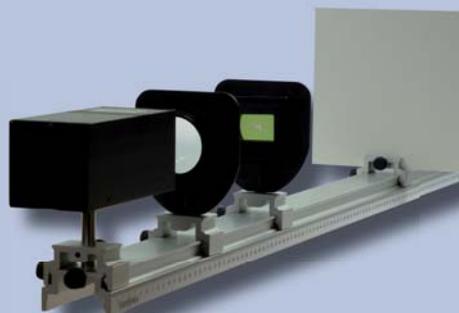


## OPTICS

### BASIC OPTICAL KIT WITH BENCH

Suitable for demonstration of the properties of refraction, diffraction and ray tracks in lenses and prisms. Provided with magnets for mounting on the metal magnetic board. The complete set is stored in a solid suitcase with layers. Optical width of the lenses is 50 mm. The halogen light source can also be used for geometric optics. The bench of 100 cm is made of anodised aluminium.

**112110**



### BASIC SUPPLEMENTARY KIT FOR GEOMETRIC OPTICS

Complete supplementary set, consists of disk lenses, mirrors, diaphragms and an opal screen with at one side a 360° circular scale and at the other side two-eye models.

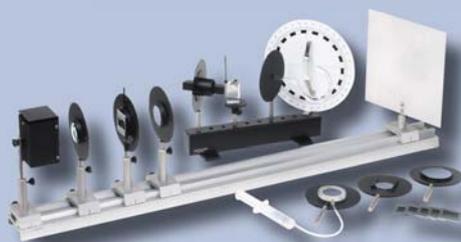
**112114**



**OPTICS DEMONSTRATION KIT**

We guarantee the quality and the exchangeability of all parts. Comes with a optical bench 120 cm, riders, light source halogen 50 watt, 8 different mounted lenses, set of diaphragms, 3 prisms with holder, adjustable split, projection screen, optical disc with lenses and accessories, set colour filters, polarisation tube, set polaroid filters, cuvette and two stands for holders.

**112300**



**LED LIGHT SOURCE**

Light source provided with ultra white LED-lamp. Perfect solution for use on the optical bench, no problem with heat and has a powerfull light beam.

**112309**



**OPTICAL SET FOR MAGNETIC BOARD**

**112200**

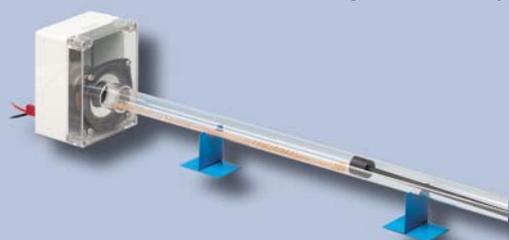


**SOUND**

**KUNDT APPARATUS**

To visualize sound waves and the measurement of wave-length in the air. This apparatus consists out of a glass tube (which has to built up horizontal), an adjustable stamp, foot rests and cork powder. By filling the glass tube with cork powder interference bellies and buttons can be showed. As vibration source a tuning-fork or loudspeaker (114059) can be used.

**119209**



**LOUDSPEAKER 8 WATT**

Versatile speaker. Conical sound source for connection to Kundt's tube or resonance tube. With transparent front so the motion of the cone is clearly visible. Provided with a lamp as overload security and as indicator for frequency and power.

**114059**

**DOME TWEETER LOUDSPEAKER**

Speaker on stem 10 mm diameter with 4 mm sockets, fused against overload.

Frequency range:

50 - 20,000 Hz

Power: 10 W,

Impedance: 8 Ohm

**114060**



**DOPPLER EFFECT**

Consisting of a freely rotating speaker with a generator on an aluminum tube profile. The generator delivers a pulsating or continuous signal of approximately 100 Hz. The generator is powered by a battery of 9 V. Length 90 cm.

**119211**



**MOTOR, DYNAMO AND VIBRATION GENERATOR**

Very strong model, built in aluminium housing with rod, screw thread and pulley. Input 0 - 12 volt DC, nominal speed 2400 rpm. With accurate speed control and direct top.

**111258**



**WEIGHING AND MASSES**

**STUDENT BALANCE**

Made of aluminium and stainless steel pans with a blue modern hard plastic base.

Capacity 500 g. Sensitivity 20 mg.

**111023**



**MASS SETS**

Made of brass, low form, arranged in 1-2-2-5 system. Aluminium fractions 50 mg/ 500 mg, complete with forceps for fraction weights. We can also offer you all different spare weights

**111043** Set 1 g - 50 g in wooden block

**111044** Set 50 mg - 100 g in plastic box

**111045** Set 50 mg - 200 g in plastic box

**111046** Set 1 g - 500 g in wooden block



## ENERGY

### WINDMILL GENERATOR ON BASE

For demonstration of wind energy conversion into electrical energy, base 90x120 mm with 4 mm sockets

**114384**

### SOLAR CELL ON BASE

Mounted on plastic base 90x120 mm with 4 mm sockets. At maximum illumination this solar cell produces 0.5 Volt at 800 mAmpère

**114385**

### MOTOR FOR SOLAR CELL 0-2V

Mounted on a plastic base 90 x 120 mm with 4 mm sockets. Small DC motor 0-2V with low starting speed. Particularly suitable for use with solar cell 114385.

**114386**



### TROLLEY WITH SOLAR CELL AND BATTERY

Smooth running car with angle adjustable solar cell and rechargeable battery. With the switch, the car is driven directly by the solar cell or battery. When stationary the battery can be recharged by the solar cell.

**114383**



### HAND GENERATOR 0-6V DC

Simple hand generator with lamp, cord and connector for external control. Because of the transparent plastic housing, the operation of the generator can be seen.

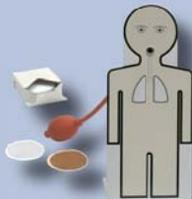
**114397**



## BIOLOGY

### SMOKING TEST-SET

Shows clearly the tar content of different cigarettes without smoking a cigarette yourself. The set consists of a filterholder on a stand with suction-balloon and a package with special filters.



**300124**

**300126** Set spare-filters, 25 pieces

### SOIL SIEVES, SET OF 5

Consisting of solid plastic cylinders with a diameter of 10 cm. The set consists of the following sieves:

- extreme fine, mesh width 0.05 mm
- very fine, mesh width 0.2 mm
- fine, mesh width 0.4 mm
- coarse, mesh width 1.0 mm
- very coarse, mesh width 1.9 mm

**181614**



### DEMONSTRATION MODEL LUNG FUNCTION

Function model that shows the working of the lungs by expansion of the chest cavity. Consisting out of a plastic jar with two fixed balloons and a rubber membrane (diaphragm) closes the bottom.

**300123**



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HOLLAND

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