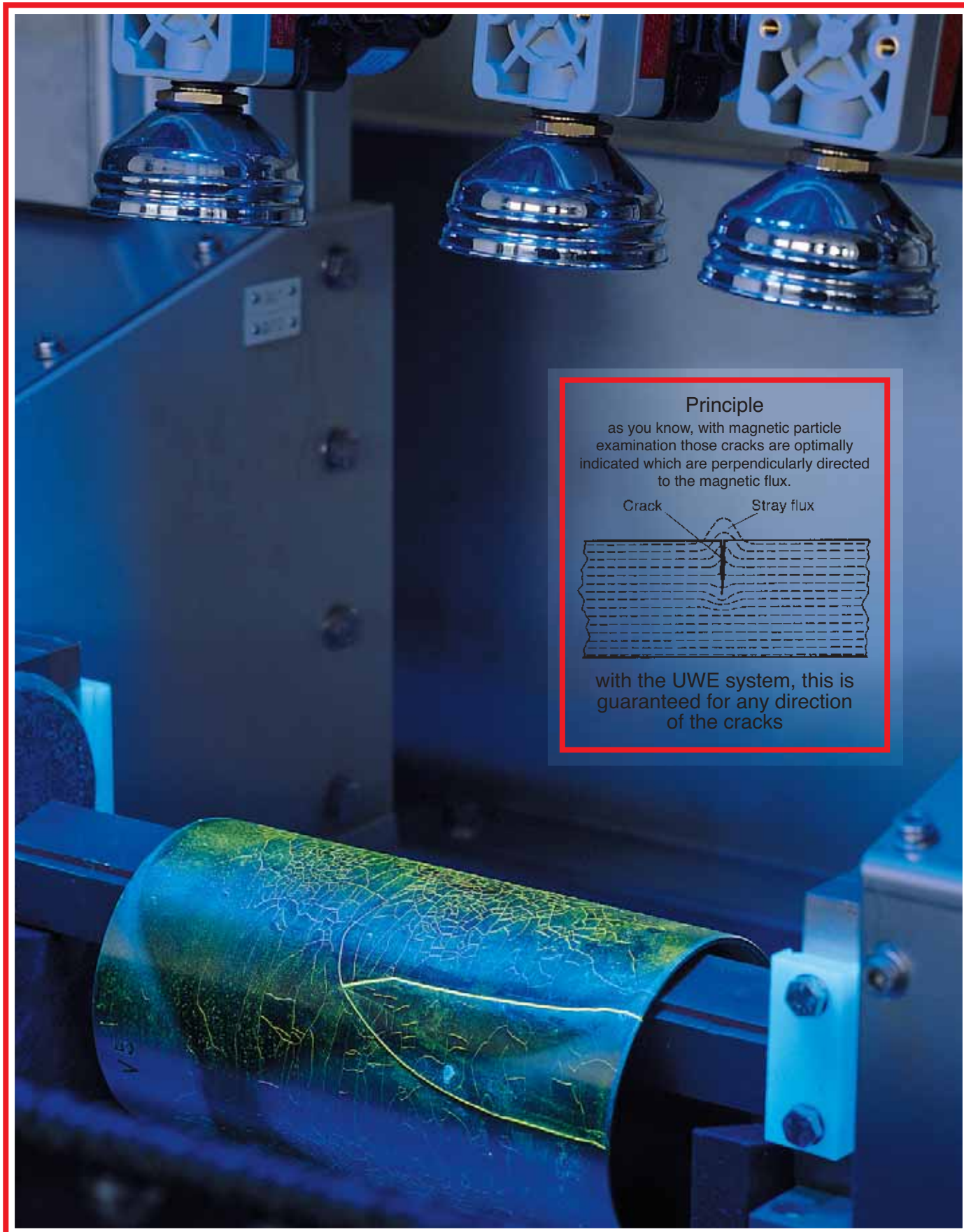


# DEUTROFLUX UWE

Universal Stationary MPE Crack Detectors

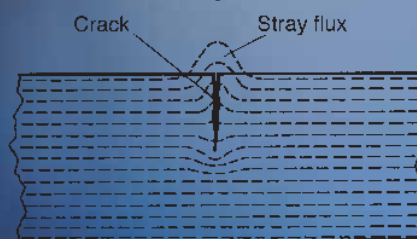


Leaflet P 33 E · Printed in Germany 4/00 · Subject to change without notice



## Principle

as you know, with magnetic particle examination those cracks are optimally indicated which are perpendicularly directed to the magnetic flux.



with the UWE system, this is guaranteed for any direction of the cracks

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# The New Flaw Reference Detector for Workpieces up to 900 mm Length

## DEUTROFLUX UWE

This flaw detector uses the skin effect of an AC for uniform magnetisation and demagnetisation without problems, even in case of complicated workpieces.

Two phase-shifted AC currents generate a rotating magnetic field; thus, cracks of any direction are indicated in a single process.

Operating errors are impossible by automatic cycle sequence (clamping, spraying, magnetising, re- and demagnetising).

Electronic and pneumatic moduls from world-wide well-known manufacturers guarantee highest operational reliability and service, even after many years.

Flanged switch cabinet, well accessible for operation and service.

Each spraying shower individually switched on and off: short spraying times and no dribbling.

Mechanical guidance outside the wet area, no varnished parts. Stainless steel in the wet area, powder coating outside.

Double versatility: As a compact unit, it can easily be shifted to other places of application. A stable construction by use of ISO profiles enables a later mounting of tubs, holding devices, etc.

FLUXA bath containers with sloping bottom, circulation pump and without corners in the pump range; no sedimentation in the container.

Braided wire contacts are rotatable and vertically adjustable for long tool-life and low contact losses.

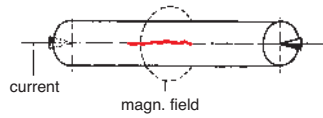
Adapted inspection cabin and illumination.

Four times economical:  
Optimum price / performance relation  
Low space requirement  
High life time  
Easy maintenance

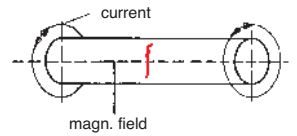


# for Magnetic Particle Examination

AC current flow

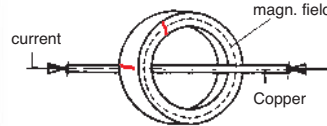


AC field flow

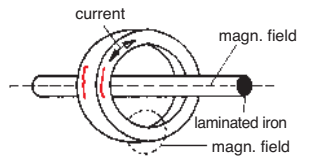


can be combined

AC auxiliary current flow with center conductor



AC transformer method



can be combined

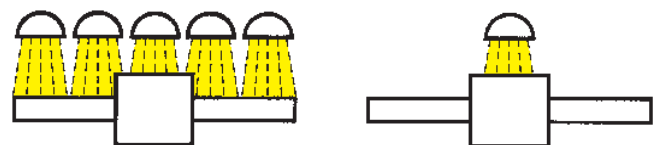


Applied for Patent:  
**Multiple Magnetisation**  
 (Publication script DE 3132390 A1)

It is the task of an ideal magnetisation unit to test the entire surface of a workpiece with the same strength resp. sensitivity.

Up to now, this has been possible at clamping lengths above 600 mm only with an additional running coil.

For the DEUTROFLUX type UWE 900 now there is the automatic two-step magnetisation: during the magnetisation process, first all showers are switched-on at a lower magnetising level matched to the pole-near ends.



After approx. 4 seconds, the control system automatically switches the outer showers off and the magnetising power on to the preselected higher step for about 2 seconds. Then, the showers in the middle are also switched off, and approx. 1 second later also the magnetisation.

The DEUTROFLUX type UWE 900, thus will get nearer to the ideal state.

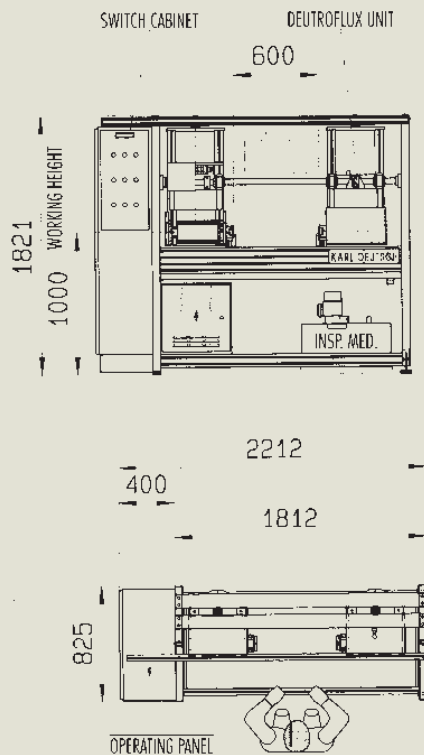


# TECHNICAL DATA

## DEUTROFLUX UWE 600

### Test Object Data

Max. length: 600 mm  
 Max. diameter: 400 mm  
 Max. weight: 100 kgs



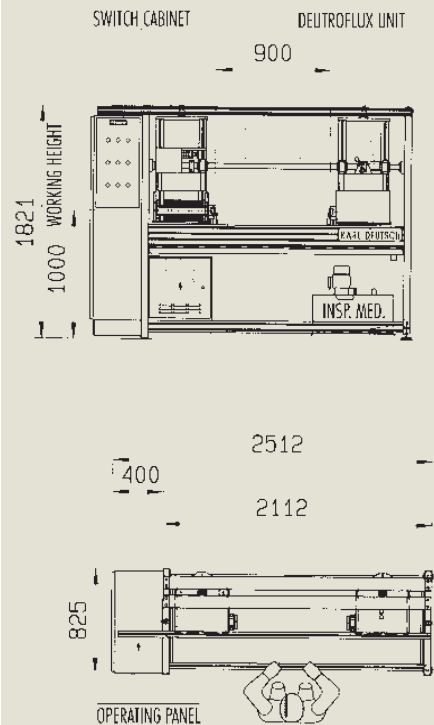
### Machine Data

Power connection: 400 V / 50 cps  
 Max. current consumption: 50 Amps  
 Max. power consumption: 20 kVA  
 Control voltage: 24 V =  
 Control system: SIMATIC SPS  
 Rel. operating factor: 40 % (60 % on request)  
 Compressed air: 4 - 6 bar  
 Air consumption per cycle: 0.5 NI  
 Clamping stroke: 8 mm standard  
 (on request higher, with two-hand operation)  
 Total weight: 680 kgs  
 (incl. switch cabinet and insp. medium container)

## DEUTROFLUX UWE 900

### Test Object Data

Max. length: 900 mm  
 Max. diameter: 400 mm  
 Max. weight: 100 kgs



### Machine Data

Power connection: 400 v / 50 cps  
 Max. current consumption: 70 Amps  
 Max. power consumption: 28 kVA  
 Control voltage: 24 V =  
 Control system: SIMATIC SPS  
 Rel. operating factor: 40 % (60 % on request)  
 Compressed air: 4 - 6 bar  
 Air consumption per cycle: 0.5 NI  
 Clamping stroke: 8 mm standard  
 (on request higher, with two-hand operation)  
 Total weight: 780 kgs  
 (incl. switch cabinet and insp. medium container)

### Current Flow

Max. testing current: 2000 Amps  
 Open circuit voltage: 5 Volts  
 Setting facilities: stepless  
 Indication: kA, analogue  
 Current flow supervision: 1 limit value

### Field Flow

Max. Flux density: > 1 T  
 Needed Ampere turns to obtain this:  
 UWE 600: 10000, UWE 900: 14000  
 Setting facilities: stepless  
 Indication: per cent Ampere turns, analogue  
 Current flow supervision: 1 limit value

### Demagnetisation

Serially: Both directions can be switched off  
 Switchable start: manual / automatic  
 Demagnetising frequency: 50 cps  
 Demagnetising time: approx. 1 s

### Cycle Switching

without / single / permanent cycle switchable  
 Magnetis. / spraying / interval individually settable  
 Max. magnetising time: 6 s

### Spraying

Manual / automatic switchable  
 Can be switched off

### Inspection Medium Container

Content: 40 l  
 Pump, electrical power: 0,78 kW  
 Pump, discharge capacity: 228 l/min  
 Height of delivery: approx. 1 m

# ORDERING NUMBERS

UWE 600 basic machine: 3034.001

### Options

Spare contact plates: 7236.0101  
 Heavy-duty rollers: 3997.044.17.2  
 Darkening cabin: 3880.0051  
 Max. testing current 3000 Amps: 3000.041  
 Max. testing current 4000 Amps: 3000.042  
 Other mains voltage > 400 V: 3000.018  
 Other mains voltage < 400 V: 3000.0189

Accessories: leaflet P 38  
 Inspection media: leaflet P 90

### Machine Alternatives:

Machine with movable coil: leaflet P 35  
 Machine with DEUTRO coil: leaflet P 31  
 Portable equipment: leaflet P 34

Technical and training literature:  
 Separate list can be ordered

UWE 900 basic machine: 3054.001

### Options

Spare contact plates: 7236.0101  
 Heavy-duty rollers: 3997.044.17.2  
 Two-step magnetisation (DBPa): 3001.0011  
 Darkening cabin: 3880.0011  
 Max. testing current 3000 Amps: 3000.041  
 Max. testing current 4000 Amps: 3000.042  
 Other mains voltage > 400 V: 3000.018  
 Other mains voltage < 400 V: 3000.0189