

**measuring equipment**

meters

continuity tester



1

| No. | Part no. | capacity test                 | display        |
|-----|----------|-------------------------------|----------------|
| 1   | 800126   | 0-90k $\Omega$ /900k $\Omega$ | optic/acoustic |

clamp-on ammeters



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| No.                                      | 1                     | 2                     | 3                           |
|------------------------------------------|-----------------------|-----------------------|-----------------------------|
| Part no.                                 | 800105                | 800119                | 800128                      |
| current range (AC)                       | 0.01-1000             | 0.1-600               | 0.1mV-750                   |
| current range (DC)                       | -                     | -                     | 0.1mV-1000                  |
| voltage range (AC)                       | 0.1-750               | 0.1-600               | 0.1-1200                    |
| voltage range (DC)                       | -                     | -                     | 0.1-1200                    |
| resistance measuring range (M $\Omega$ ) | 1-4000 $\Omega$       | 1-2000 $\Omega$       | 100m $\Omega$ -40M $\Omega$ |
| pliers aperture (mm)                     | 52                    | 36                    | 52                          |
| frequency range                          | 10Hz~4MHz             | 10Hz~5MHz             | 0.01Hz~500KHz               |
| note                                     | incl. bag and battery | incl. bag and battery | incl. bag and battery       |

conductivity meters



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| No. | Part no. | measuring range       | temperature range (°C) | display                  | function                  | measures (mm) |
|-----|----------|-----------------------|------------------------|--------------------------|---------------------------|---------------|
| 1   | 800196   | 0 $\mu$ S/cm-200mS/cm | 0-85                   | conductivity/temperature | auto-range; hold function | 142x71x26     |

accessories

cases



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| No. | Part no. | measures (mm) | usage                                               |
|-----|----------|---------------|-----------------------------------------------------|
| 1   | 800197   | 275x229x83    | conductivity-, exhaust-, pH-meter/digital manometer |

## conductivity meters type TDS



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| No. | Part no. | measuring range | temperature range (°C) | display | dimensions (mm) |
|-----|----------|-----------------|------------------------|---------|-----------------|
| 1   | 800010   | 0 - 1999 ppm    | 0 to +50               | ppm     | 175x41x23       |

## digital multimeters



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| No.                             | 1           | 2            | 3         | 4         |
|---------------------------------|-------------|--------------|-----------|-----------|
| Part no.                        | 800124      | 800098       | 800125    | 800145    |
| ranging mode                    | Auto-Range  | manual       | manual    | manual    |
| voltage range (AC)              | 1mV-750     | 1mV-750      | 1mV-750   | 1mV-750   |
| voltage range (DC)              | 0.1mV-1000  | 0.1mV-1000   | 1mV-1000  | 1mV-1000  |
| current range (AC)              | 1μA-10      | 0.1mA-20     | -         | 0.1μA-10  |
| current range (DC)              | 1μA-10      | 1μA-20       | 1μA-200m  | 0.1μA-10  |
| resistance measuring range (MΩ) | 0.1Ω-40mΩ   | 0.1Ω-20mΩ    | 0.1Ω-2mΩ  | 0.1Ω-20mΩ |
| temperature range (°C)          | -           | -20 to +1000 | -         | -         |
| diode test                      | yes         | yes          | yes       | yes       |
| transistor test                 | -           | yes          | yes       | yes       |
| capacity test                   | yes         | yes          | yes       | yes       |
| measured value memory           | yes         | -            | -         | yes       |
| relative value function REL     | yes         | -            | -         | -         |
| min/max value identification    | yes         | -            | -         | yes       |
| dimensions (mm)                 | 186x86x39   | 189x91x31.5  | 120x72x37 | 186x86x39 |
| display                         | 3¾ digits   | 3½ digits    | 3½ digits | 3½ digits |
| capacity range                  | 1pF-20μF    | 1pF-20μF     | -         | 1pF-20μF  |
| frequency range                 | 0.01Hz-1kHz | 1Hz-20kHz    | -         | 1Hz-10MHz |

## exhaust gas meters



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| No. | Part no. | measuring range | dimensions (mm) | note                | type    |
|-----|----------|-----------------|-----------------|---------------------|---------|
| 1   | 802033   | 0-1000ppm       | 142x71x26       | integrated probe    | GCO 100 |
| 2   | 802152   | 0-1000ppm       | 175x80x32       | incl. probe and bag | ID155C  |

accessories  
interface converters



| No. | Part no. | connection      | for model      | type     |
|-----|----------|-----------------|----------------|----------|
| 1   | 800006   | RS232 interface | GMH 3xxx & GCO | GRS 3100 |
| 2   | 800007   | USB interface   | GMH 3xxx & GCO | USB 3100 |

cases



| No. | Part no. | measures (mm) | usage                                             |
|-----|----------|---------------|---------------------------------------------------|
| 1   | 800197   | 275x229x83    | conductivity-,exhaust-,pH-meter/digital manometer |

leak detectors  
for coolant



| No. | Part no. | application                | signal             | display | note                   |
|-----|----------|----------------------------|--------------------|---------|------------------------|
| 1   | 690682   | all coolants halogen based | optical/acoustical | LED     | with case and batterie |

for microwave



| No. | Part no. | note                  | measuring range |
|-----|----------|-----------------------|-----------------|
| 1   | 801169   | incl. bag and battery | 0-10mW/cm       |

| No. | Part no. | note                  | measuring range          |
|-----|----------|-----------------------|--------------------------|
| 2   | 801236   | incl. bag and battery | 0-9.99mW/cm <sup>2</sup> |

for natural and liquid gas



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| No. | Part no. | signal         | display   | dimensions (mm) | probe    | detail                     |
|-----|----------|----------------|-----------|-----------------|----------|----------------------------|
| 1   | 802153   | optic/acoustic | LED       | 220x160x40      | external | incl. bag and battery      |
| 2   | 802154   | optic/acoustic | LED-scale | 235x55x37       | internal | incl. bag and battery      |
| 3   | 802155   | optic/acoustic | LED-scale | 280x120x90      | external | with bag and mains adapter |

microwave indicators



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| No. | Part no. | application                                | dimensions (mm) | type  | version                  |
|-----|----------|--------------------------------------------|-----------------|-------|--------------------------|
| 1   | 801173   | indicates microwave distribution in cavity | 150x30x15       | TM319 | with illuminated display |

pH meters



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| No. | Part no. | pH range | temperature range (°C) | connection |
|-----|----------|----------|------------------------|------------|
| 1   | 800198   | 0-14pH   | -100 to +250           | BNC socket |

accessories  
probes



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| No. | Part no. | pH range | temperature range (°C) | connection |
|-----|----------|----------|------------------------|------------|
| 1   | 800199   | 0-14pH   | 0-80                   | BNC plug   |

CASES



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| No. | Part no. | measures (mm) | usage                                               |
|-----|----------|---------------|-----------------------------------------------------|
| 1   | 800197   | 275x229x83    | conductivity-, exhaust-, pH-meter/digital manometer |

pressure measurement  
digital manometer sets



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|                          |                                  |
|--------------------------|----------------------------------|
| No.                      | 1                                |
| Part no.                 | 800008                           |
| measurement range (mbar) | 0 to 140                         |
| type                     | PM 6530                          |
| function                 | differential-pressure            |
| measurement unit         | mbar, kPa, MPa, mmHg, PSI        |
| note                     | case/hoses/software/power supply |

digital manometers  
vacuum + barometric pressure measurement



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| No. | Part no. | measurement range (mbar) | measurement unit                                  | type        |
|-----|----------|--------------------------|---------------------------------------------------|-------------|
| 1   | 800002   | 0 up to 1300             | mbar, bar, kPa, MPa, PSI, mmHg, mH <sub>2</sub> O | GMH 3161-12 |
| 2   | 541583   | 0.05-50                  | mbar/psi/in. Hg/kPa/w.c./mmHg                     | 476A        |

## vacuum/over-/differential-pressure measurement



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| No. | Part no. | measurement range (mbar) | measurement unit          | type         |
|-----|----------|--------------------------|---------------------------|--------------|
| 1   | 800005   | 0 to 19.99 / 199.9       | Pa/mbar/mmHg,PSI          | GDH 200-07   |
| 2   | 800004   | -1.00 to 70.00           | bar,Pa,kPa,PSI,mmHg,mH2O  | GMH 3161-07H |
| 3   | 800000   | -100 to 2000             | bar,kPa,MPa,mmHg,PSI,mH2O | GMH 3161-13  |

## cases



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| No. | Part no. | measures (mm) | usage                                             |
|-----|----------|---------------|---------------------------------------------------|
| 1   | 800197   | 275x229x83    | conductivity-,exhaust-,pH-meter/digital manometer |

## U-tube manometers



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| No. | Part no. | type   | pressure range (mbar) | version |
|-----|----------|--------|-----------------------|---------|
| 1   | 250053   | MA 138 | 0-60                  | rigid   |

| No. | Part no. | type     | pressure range (mbar) | version  |
|-----|----------|----------|-----------------------|----------|
| 2   | 250052   | Manoflex | 0-60                  | rollable |

temperature meters  
infrared



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| No. | Part no. | measuring range<br>(°C) | measurement unit |
|-----|----------|-------------------------|------------------|
| 1   | 800305   | -20 to 520              | °C/°F            |

with exchangeable probe



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| No. | Part no. | version          | measurement unit | measuring range<br>(°C) | probe |
|-----|----------|------------------|------------------|-------------------------|-------|
| 1   | 800106   | incl. wire probe | °C/°F            | -50 to 1300             | K     |
| 2   | 800190   | no probe         | °C               | -50 to 1150             | K     |

accessories  
cases



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| No. | Part no. | measures<br>(mm) | usage                            |
|-----|----------|------------------|----------------------------------|
| 1   | 800116   | 340x270x80       | for temperature measuring device |

sets



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| No. | Part no. | note                                        | measurement unit | measuring range<br>(°C) | probe |
|-----|----------|---------------------------------------------|------------------|-------------------------|-------|
| 1   | 800123   | meter/wire probe, plunge probe              | °C/°F            | -50 to 1300             | K     |
| 2   | 800115   | meter/wire-, surface-, plunge probe         | °C/°F            | -50 to 1300             | K     |
| 3   | 800118   | multimeter/ surface-, plunge probe/plug set | °C               | -20 to +1000            | K     |

## temperature probes

### wire probes



| No. | Part no. | probe type | temperature range (°C) | response time (sec) | cable length (mm) |
|-----|----------|------------|------------------------|---------------------|-------------------|
| 1   | 800110   | K          | -50 to +400            | 5                   | 900               |

### Low Budget



| No. | Part no. | Description                               | cable length (mm) |
|-----|----------|-------------------------------------------|-------------------|
| 1   | 800193   | liquids probe probe type K -50 to +1000°C | 1000              |
| 2   | 800192   | surface probe probe type K -50 to +450°C  | 1000              |
| 3   | 800191   | plunge probe probe type K -50 to +550°C   | 1000              |

### with spiral cable



| No. | Part no. | Description                               | cable length (mm) |
|-----|----------|-------------------------------------------|-------------------|
| 1   | 800112   | plunge probe probe type K -50 to +600°C   | 1300              |
| 2   | 800108   | surface probe probe type K -50 to +1000°C | 1400              |

### with integrated probe



| No. | Part no. | measurement unit | measuring range (°C) | probe             | measures (mm) | probe length (mm) |
|-----|----------|------------------|----------------------|-------------------|---------------|-------------------|
| 1   | 802116   | °C/°F            | -50 to +300          | penetration probe | 116x58x18     | 105               |
| 2   | 800003   | °C/°F            | -50 to +300          | penetration probe | 141x95x26     | 140               |

with penetration probe



| No. | Part no. | display  | measuring range (°C) | probe length (mm) |
|-----|----------|----------|----------------------|-------------------|
| 1   | 541097   | analogue | -10 to 100           | 120               |
| 2   | 802028   | analogue | -10 to 100           | 130               |
| 3   | 541634   | digital  | -50 to +300          | 85                |

| No. | Part no. | display | measuring range (°C) | probe length (mm) |
|-----|----------|---------|----------------------|-------------------|
| 4   | 541636   | digital | -50 to +300          | 115               |
| 5   | 541087   | digital | -50 to +300          | 120               |
| 6   | 541096   | digital | -50 to +300          | 120               |



| No. | Part no. | display | measuring range (°C) | probe length (mm) |
|-----|----------|---------|----------------------|-------------------|
| 7   | 541635   | digital | -50 to +300          | 120               |

voltage indicators



| No. | Part no. | voltage type | voltage range (V) | version                                     | check       |
|-----|----------|--------------|-------------------|---------------------------------------------|-------------|
| 1   | 800139   | AC/DC        | 6-690             | 2 pole with rotary field and phases display | VDE, GS, CE |

accessories

cases



| No. | Part no. | measures (mm) | usage                                               |
|-----|----------|---------------|-----------------------------------------------------|
| 1   | 800197   | 275x229x83    | conductivity-, exhaust-, pH-meter/digital manometer |
| 2   | 800116   | 340x270x80    | for temperature measuring device                    |

## interface converters



| No. | Part no. | connection      | for model      | type     |
|-----|----------|-----------------|----------------|----------|
| 1   | 800006   | RS232 interface | GMH 3xxx & GCO | GRS 3100 |
| 2   | 800007   | USB interface   | GMH 3xxx & GCO | USB 3100 |

## measuring conductors



| No. | Part no. | Description                               |
|-----|----------|-------------------------------------------|
| 1   | 800167   | connecting piece black L 40mm ø 4mm       |
| 2   | 800166   | connecting piece red L 40mm ø 4mm         |
| 3   | 800169   | measuring conductors black L 1000mm ø 4mm |
| 4   | 800168   | measuring conductors red L 1000mm ø 4mm   |

## test prods



| No. | Part no. | Description                           |
|-----|----------|---------------------------------------|
| 1   | 800156   | alligator clip black ø 4mm            |
| 2   | 800155   | alligator clip red ø 4mm              |
| 3   | 800162   | testing centre black ø 4mm            |
| 4   | 800161   | testing centre red ø 4mm              |
| 5   | 800164   | vice clamp testing centre black ø 4mm |
| 6   | 800163   | vice clamp testing centre red ø 4mm   |

## test prod set



| No. | Part no. | content | ø (mm) | cable length (mm) |
|-----|----------|---------|--------|-------------------|
| 1   | 800122   | 2-piece | 4      | 1000              |
| 2   | 800170   | 8-piece | 4      | 1000              |

## measuring tools

### scales



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| No. | Part no. | measuring range | resolution | measures (mm) |
|-----|----------|-----------------|------------|---------------|
| 1   | 802115   | 0.1 - 150g      | 0.1g       | 128x78x18     |

### folding rules



| No. | Part no. | L (mm) | material |
|-----|----------|--------|----------|
| 1   | 801341   | 2000   | plastic  |

| No. | Part no. | L (mm) | material |
|-----|----------|--------|----------|
| 2   | 801340   | 2000   | wood     |

### nozzle gauges



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| No. | Part no. | size (mm) | version    |
|-----|----------|-----------|------------|
| 1   | 800080   | 0.1-3     | adjustable |
| 2   | 800083   | 0.1-5     | adjustable |

| No. | Part no. | size (mm) | version                |
|-----|----------|-----------|------------------------|
| 3   | 800082   | 0.45-1.5  | with 20 measuring pins |
| 4   | 800081   | 1.5-3     | with 16 measuring pins |

### reel measuring tapes



| No. | Part no. | L (m) | version |
|-----|----------|-------|---------|
| 1   | 801345   | 2     | -       |
| 2   | 801346   | 3     | -       |

| No. | Part no. | L (m) | version                |
|-----|----------|-------|------------------------|
| 3   | 801348   | 3     | with inspection window |
| 4   | 801347   | 5     | -                      |

## rulers



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| No. | Part no. | L<br>(mm) | material | version | splitting |
|-----|----------|-----------|----------|---------|-----------|
| 1   | 801469   | 300       | VA steel | rigid   | 1.0/0.5mm |

## slide calipers

## slide calipers fibreglass

WIHA



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| No. | Part no. | display      | measuring range<br>(mm) |
|-----|----------|--------------|-------------------------|
| 1   | 801344   | digital      | 0-150                   |
| 2   | 801342   | linear scale | 0-130                   |

| No. | Part no. | display            | measuring range<br>(mm) |
|-----|----------|--------------------|-------------------------|
| 3   | 801343   | with circular dial | 0-150                   |

## slide calipers stainless steel



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| No. | Part no. | display      | measuring range<br>(mm) |
|-----|----------|--------------|-------------------------|
| 1   | 801471   | digital      | 0-150                   |
| 2   | 801350   | linear scale | 0-150                   |

| No. | Part no. | display            | measuring range<br>(mm) |
|-----|----------|--------------------|-------------------------|
| 3   | 801470   | with circular dial | 0-150                   |

## spirit levels



32

| No. | Part no. | L<br>(mm) | material    |
|-----|----------|-----------|-------------|
| 1   | 801290   | 400       | light metal |

| No. | Part no. | L<br>(mm) | material    |
|-----|----------|-----------|-------------|
| 2   | 801291   | 800       | light metal |