

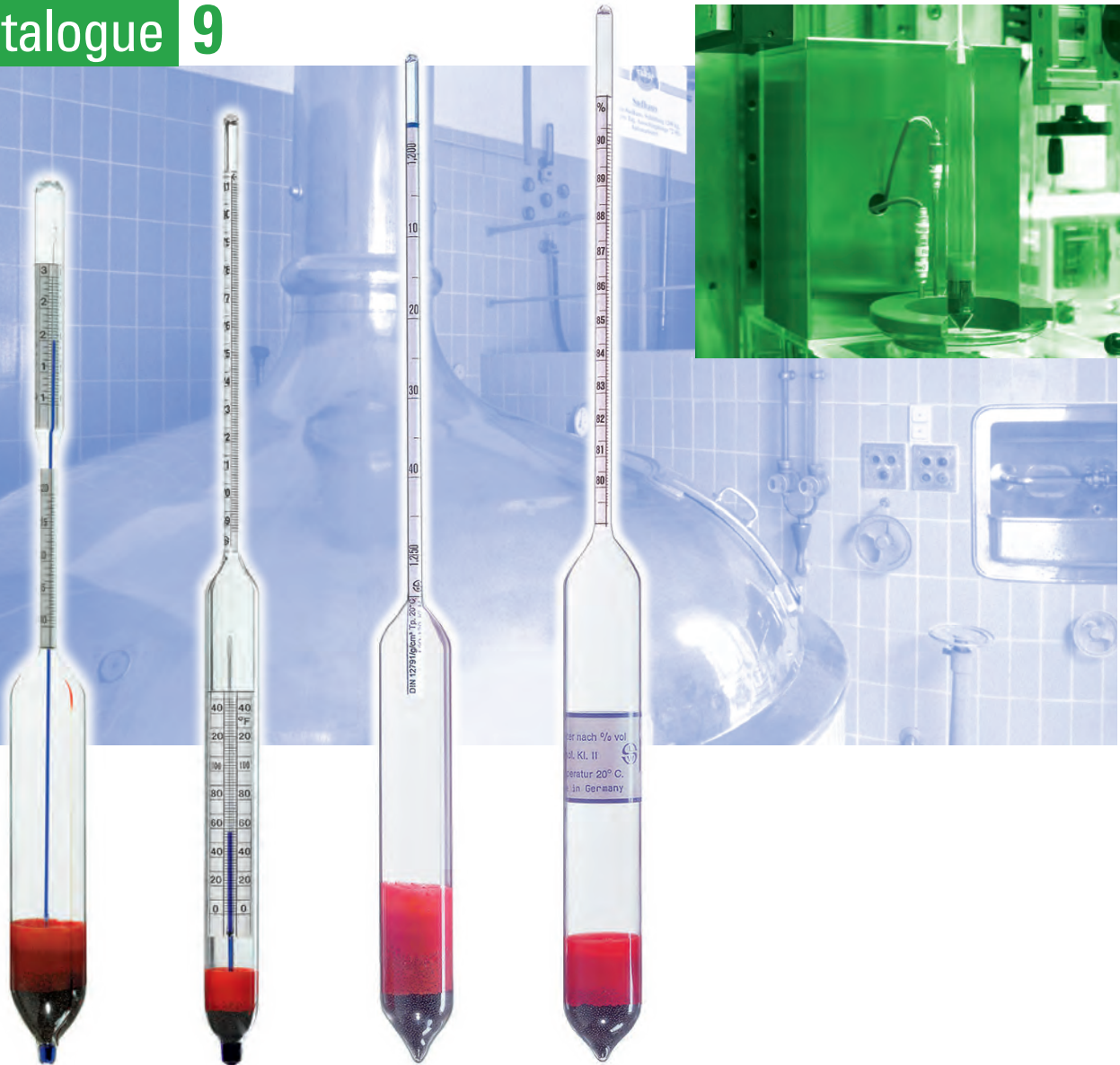
# Precision Hydrometers



**High-precision instruments for determination of fluid density**

Hydrometers acc. to DIN/ISO/BS/ASTM,  
special hydrometers

Catalogue 9



**Ludwig Schneider** 

*High-precision measuring instruments for  
temperature and density*

# DAkKS calibration laboratory for temperature and density

Ludwig Schneider is one of the world's leading manufacturers of precision measuring instruments for temperature and density. Based on these experiences its subsidiary company Ludwig Schneider Messtechnik GmbH (LSM) has been offering calibration services for temperature measurements for 25 years.

Since 2005 LSM has been the first private-sector company in Germany with accreditation for density measurements of hydrometers.

International customers of the chemical, pharmaceutical, mineral oil/refinery, food processing industries and oceanography are using the LSM calibration services.

## DAkKS accreditation

Ludwig Schneider Messtechnik is accredited under registration number D-K-15223-01-00 and fully complies with the requirements of DIN EN ISO/IEC 17025.

United under the International Laboratory Accreditation Cooperation (ILAC), 52 nations at present have contractually agreed to mutually accept the calibration results of the signatories' accredited calibration laboratories according to DIN EN ISO/IEC 17025.

## Our range of services

- Comparative measurements of resistance thermometers, thermocouples, liquid-in-glass thermometers, temperature indicators, temperature block calibrators
- Adjustment of digital/analog measured data acquisition systems
- Calculation of specific constants on the basis of ITS-90 deviation functions, Van Dusen equations, polynomial functions
- Documentation of calibration results: DAkKS calibration certificates, works calibration certificates, conformity statements, compliance with QM codes and standards (DIN, ASTM, BS, IEC, etc.)



ISO  
ASTM  
BS  
DIN

Deutsche  
Akkreditierungsstelle  
D-K-15223-01-00



## Ludwig Schneider Messtechnik GmbH

Postfach 1561 · 97865 Wertheim  
Am Eichamt 4 · 97877 Wertheim  
Tel.: +49 9342 8560-0  
Fax: +49 9342 84399  
Mail: dakks@kalibrierlabor.org  
www.kalibrierlabor.org



# Table of contents

Precision density hydrometers acc. to DIN 12791	5-8
Density hydrometers	9-13
Range finders for density/specific gravity/Baumé	14
Precision hydrometers for specific gravity	15
Precision hydrometers acc. to British Standard	16-17
Precision hydrometers acc. to ASTM	18, 20-24
API hydrometers	19
Precision hydrometers for liquid gas	25
Precision hydrometers for mineral oil	26
Precision hydrometers acc. to Baumé	27-29
Precision saccharometers	30-34
Precision alcoholmeters	35-36
Alcoholmeter and alcohol tester	37-41
Precision hydrometers for must of fruits and grapes	42
Precision hydrometers for dairies	43-45
Precision hydrometers for seawater	46
Precision hydrometers for special applications	47-48
Cylindrical stands for hydrometers	49
Hydrometers for testing accumulators	49
Hydrometers made of plastic	50-51
Technical details	52-53

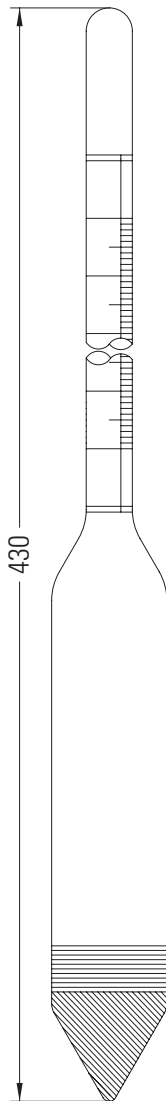
# Precision density hydrometers



## Product information

- All hydrometers shown in this catalogue are available with DAkkS calibration certificate or works calibration certificate
- Most hydrometer types are available with integrated thermometer
- Hydrometer sets are available with case on request
- Ludwig Schneider is specialized in manufacturing hydrometers according to customer's individual specifications
- All Instruments will be single-packed in transparent square plastic sleeve
- Technical details are subject to change without notice

# Precision density hydrometers acc. to DIN 12791



## L20 series

Ref. temperature: 20 °C, Scale division: 0.0002 g/cm<sup>3</sup>, error limit: ±0.0002 g/cm<sup>3</sup>  
without thermometer, total length: 430 mm, each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
L20-060	0.600-0.620	3112001
L20-062	0.620-0.640	3112002
L20-064	0.640-0.660	3112003
L20-066	0.660-0.680	3112004
L20-068	0.680-0.700	3112005
L20-070	0.700-0.720	3112006
L20-072	0.720-0.740	3112007
L20-074	0.740-0.760	3112008
L20-076	0.760-0.780	3112009
L20-078	0.780-0.800	3112010
L20-080	0.800-0.820	3112011
L20-082	0.820-0.840	3112012
L20-084	0.840-0.860	3112013
L20-086	0.860-0.880	3112014
L20-088	0.880-0.900	3112015
L20-090	0.900-0.920	3112016
L20-092	0.920-0.940	3112017
L20-094	0.940-0.960	3112018
L20-096	0.960-0.980	3112019
L20-098	0.980-1.000	3112020
L20-100	1.000-1.020	3112021
L20-102	1.020-1.040	3112022
L20-104	1.040-1.060	3112023
L20-106	1.060-1.080	3112024
L20-108	1.080-1.100	3112025
L20-110	1.100-1.120	3112026
L20-112	1.120-1.140	3112027
L20-114	1.140-1.160	3112028
L20-116	1.160-1.180	3112029
L20-118	1.180-1.200	3112030
L20-120	1.200-1.220	3112031
L20-122	1.220-1.240	3112032
L20-124	1.240-1.260	3112033
L20-126	1.260-1.280	3112034
L20-128	1.280-1.300	3112035

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
L20-130	1.300-1.320	3112036
L20-132	1.320-1.340	3112037
L20-134	1.340-1.360	3112038
L20-136	1.360-1.380	3112039
L20-138	1.380-1.400	3112040
L20-140	1.400-1.420	3112041
L20-142	1.420-1.440	3112042
L20-144	1.440-1.460	3112043
L20-146	1.460-1.480	3112044
L20-148	1.480-1.500	3112045
L20-150	1.500-1.520	3112046
L20-152	1.520-1.540	3112047
L20-154	1.540-1.560	3112048
L20-156	1.560-1.580	3112049
L20-158	1.580-1.600	3112050
L20-160	1.600-1.620	3112051
L20-162	1.620-1.640	3112052
L20-164	1.640-1.660	3112053
L20-166	1.660-1.680	3112054
L20-168	1.680-1.700	3112055
L20-170	1.700-1.720	3112056
L20-172	1.720-1.740	3112057
L20-174	1.740-1.760	3112058
L20-176	1.760-1.780	3112059
L20-178	1.780-1.800	3112060
L20-180	1.800-1.820	3112061
L20-182	1.820-1.840	3112062
L20-184	1.840-1.860	3112063
L20-186	1.860-1.880	3112064
L20-188	1.880-1.900	3112065
L20-190	1.900-1.920	3112066
L20-192	1.920-1.940	3112067
L20-194	1.940-1.960	3112068
L20-196	1.960-1.980	3112069
L20-198	1.980-2.000	3112070

Complete set consisting of 70 pcs. L20-060 to L20-198: **Art.-No.: 3112001-3112070**

### Surface tension:

Low = Class L (yellow) up to 1.000 g/cm<sup>3</sup>  
High = Class H (blue) above 1.000 g/cm<sup>3</sup>  
Medium = Class M (red) on request

### Additional order no.

...../03 with works calibration certificate  
...../04 with DAkkS calibration certificate

# Precision density hydrometers acc. to DIN 12791



## L20Th series

Ref. temperature: 20 °C

Scale division: 0.0002 g/cm<sup>3</sup>

Error limit: ±0.0002 g/cm<sup>3</sup>

**With thermometer: 0+25 °C in 0.2 °C,**

**Filling: Hg, error limit: ±0.2 °C**

Total length: 430 mm

Each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
L20Th-060	0.600-0.620	3122001
L20Th-062	0.620-0.640	3122002
L20Th-064	0.640-0.660	3122003
L20Th-066	0.660-0.680	3122004
L20Th-068	0.680-0.700	3122005
L20Th-070	0.700-0.720	3122006
L20Th-072	0.720-0.740	3122007
L20Th-074	0.740-0.760	3122008
L20Th-076	0.760-0.780	3122009
L20Th-078	0.780-0.800	3122010
L20Th-080	0.800-0.820	3122011
L20Th-082	0.820-0.840	3122012
L20Th-084	0.840-0.860	3122013
L20Th-086	0.860-0.880	3122014
L20Th-088	0.880-0.900	3122015
L20Th-090	0.900-0.920	3122016
L20Th-092	0.920-0.940	3122017
L20Th-094	0.940-0.960	3122018
L20Th-096	0.960-0.980	3122019
L20Th-098	0.980-1.000	3122020
L20Th-100	1.000-1.020	3122021
L20Th-102	1.020-1.040	3122022
L20Th-104	1.040-1.060	3122023
L20Th-106	1.060-1.080	3122024
L20Th-108	1.080-1.100	3122025
L20Th-110	1.100-1.120	3122026
L20Th-112	1.120-1.140	3122027
L20Th-114	1.140-1.160	3122028
L20Th-116	1.160-1.180	3122029
L20Th-118	1.180-1.200	3122030
L20Th-120	1.200-1.220	3122031
L20Th-122	1.220-1.240	3122032
L20Th-124	1.240-1.260	3122033
L20Th-126	1.260-1.280	3122034
L20Th-128	1.280-1.300	3122035

## Mercury-free version available on request:

with blue organic filling (similar to DIN),

thermometer error limit: ± 0.5 °C

## Surface tension:

Low = Class L (yellow) up to 1.000 g/cm<sup>3</sup>

High = Class H (blue) above 1.000 g/cm<sup>3</sup>

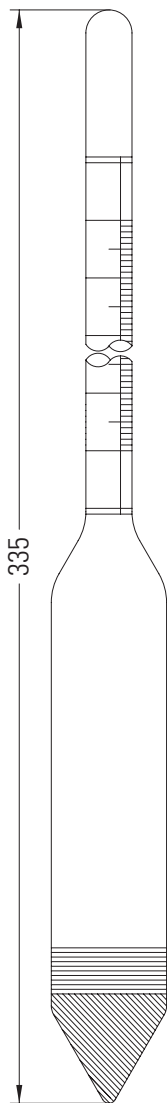
Medium = Class M (red) on request

## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision density hydrometers acc. to DIN 12791



## L50 series

Ref. temperature: 20 °C  
Scale division: 0.0005 g/cm<sup>3</sup>  
Error limit: ±0.0005 g/cm<sup>3</sup>  
Without thermometer, total length: 335 mm  
Each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
L 50		
L50-060	0.600-0.650	3132001
L50-065	0.650-0.700	3132002
L50-070	0.700-0.750	3132003
L50-075	0.750-0.800	3132004
L50-080	0.800-0.850	3132005
L50-085	0.850-0.900	3132006
L50-090	0.900-0.950	3132007
L50-095	0.950-1.000	3132008
L50-100	1.000-1.050	3132009
L50-105	1.050-1.100	3132010
L50-110	1.100-1.150	3132011
L50-115	1.150-1.200	3132012
L50-120	1.200-1.250	3132013
L50-125	1.250-1.300	3132014
L50-130	1.300-1.350	3132015
L50-135	1.350-1.400	3132016
L50-140	1.400-1.450	3132017
L50-145	1.450-1.500	3132018
L50-150	1.500-1.550	3132019
L50-155	1.550-1.600	3132020
L50-160	1.600-1.650	3132021
L50-165	1.650-1.700	3132022
L50-170	1.700-1.750	3132023
L50-175	1.750-1.800	3132024
L50-180	1.800-1.850	3132025
L50-185	1.850-1.900	3132026
L50-190	1.900-1.950	3132027
L50-195	1.950-2.000	3132028
Complete set in 2 cases		3132041
Case for 14 pcs.		477050

Available on request: **L 50 Th series**

Thermometer: 0+30 °C in 0.5 °C, Filling: Hg  
Error limit: ± 0.25 °C, total length: 370 mm  
or mercury-free with blue organic filling  
(similar to DIN),  
Thermometer error limit: ± 0.5 °C

### Surface tension:

Low = Class L (yellow) up to 1.000 g/cm<sup>3</sup>  
High = Class H (blue) above 1.000 g/cm<sup>3</sup>  
Medium = Class M (red) on request

### Additional order no.

...../03 with works calibration certificate  
...../04 with DAkkS calibration certificate



## M50 series

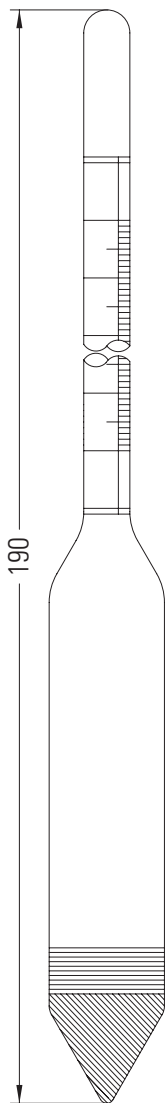
Ref. temperature: 20 °C  
Scale division: 0.001 g/cm<sup>3</sup>  
Error limit: ±0.001 g/cm<sup>3</sup>  
Without thermometer, total length: 270 mm  
Each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
M 50		
M 50-060	0.600-0.650	3172001
M 50-065	0.650-0.700	3172002
M 50-070	0.700-0.750	3172003
M 50-075	0.750-0.800	3172004
M 50-080	0.800-0.850	3172005
M 50-085	0.850-0.900	3172006
M 50-090	0.900-0.950	3172007
M 50-095	0.950-1.000	3172008
M 50-100	1.000-1.050	3172009
M 50-105	1.050-1.100	3172010
M 50-110	1.100-1.150	3172011
M 50-115	1.150-1.200	3172012
M 50-120	1.200-1.250	3172013
M 50-125	1.250-1.300	3172014
M 50-130	1.300-1.350	3172015
M 50-135	1.350-1.400	3172016
M 50-140	1.400-1.450	3172017
M 50-145	1.450-1.500	3172018
M 50-150	1.500-1.550	3172019
M 50-155	1.550-1.600	3172020
M 50-160	1.600-1.650	3172021
M 50-165	1.650-1.700	3172022
M 50-170	1.700-1.750	3172023
M 50-175	1.750-1.800	3172024
M 50-180	1.800-1.850	3172025
M 50-185	1.850-1.900	3172026
M 50-190	1.900-1.950	3172027
M 50-195	1.950-2.000	3172028
Complete set in 2 cases		3172041
Case for 14 pcs.		477051

Available on request: **M 50 Th series**

Thermometer: 0+30 °C in 1 °C, filling: Hg  
Error limit: ± 0.5 °C, total length: 310 mm  
or mercury-free with blue organic filling  
(similar to DIN),  
Thermometer error limit: ± 1 °C

# Precision density hydrometers acc. to DIN 12791



## **S 50 series**

Ref. temperature: 20 °C  
Scale division: 0.002 g/cm<sup>3</sup>  
Error limit: ±0.002 g/cm<sup>3</sup>  
Without thermometer, total length: 190 mm  
Each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
<b>S 50</b>		
S50-060	0.600-0.650	3152001
S50-065	0.650-0.700	3152002
S50-070	0.700-0.750	3152003
S50-075	0.750-0.800	3152004
S50-080	0.800-0.850	3152005
S50-085	0.850-0.900	3152006
S50-090	0.900-0.950	3152007
S50-095	0.950-1.000	3152008
S50-100	1.000-1.050	3152009
S50-105	1.050-1.100	3152010
S50-110	1.100-1.150	3152011
S50-115	1.150-1.200	3152012
S50-120	1.200-1.250	3152013
S50-125	1.250-1.300	3152014
S50-130	1.300-1.350	3152015
S50-135	1.350-1.400	3152016
S50-140	1.400-1.450	3152017
S50-145	1.450-1.500	3152018
S50-150	1.500-1.550	3152019
S50-155	1.550-1.600	3152020
S50-160	1.600-1.650	3152021
S50-165	1.650-1.700	3152022
S50-170	1.700-1.750	3152023
S50-175	1.750-1.800	3152024
S50-180	1.800-1.850	3152025
S50-185	1.850-1.900	3152026
S50-190	1.900-1.950	3152027
S50-195	1.950-2.000	3152028
Complete set in 2 cases		3152041
Case for 14 pcs.		201341

Available on request: **S 50 Th series**

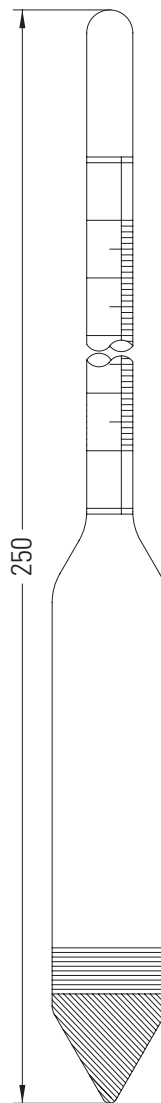
Thermometer: 0+30 °C in 1 °C, filling: Hg  
Error limit: ± 0.5 °C, total length: 240 mm  
Or mercury-free with blue organic filling  
(similar to DIN),  
Thermometer error limit: ± 1 °C

### **Surface tension:**

Low = Class L (yellow) up to 1.000 g/cm<sup>3</sup>  
High = Class H (blue) above 1.000 g/cm<sup>3</sup>  
Medium = Class M (red) on request

### **Additional order no.**

...../03 with works calibration certificate  
...../04 with DAkkS calibration certificate



## **M 100 series**

Ref. temperature: 20 °C  
Scale division: 0.002 g/cm<sup>3</sup>  
Error limit: ±0.002 g/cm<sup>3</sup>  
Without thermometer, total length: 250 mm  
Each packed in a square plastic sleeve

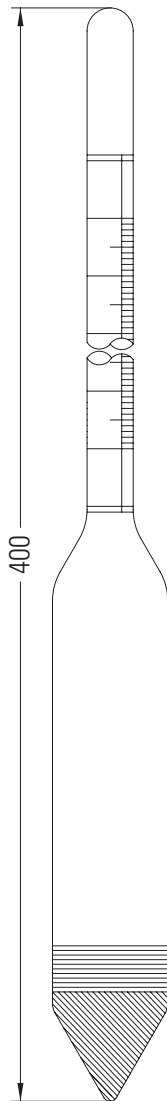
Type	Measuring range g/cm <sup>3</sup>	Art.-No.
<b>M 100</b>		
M100-060	0.600-0.700	3192001
M100-070	0.700-0.800	3192002
M100-080	0.800-0.900	3192003
M100-090	0.900-1.000	3192004
M100-100	1.000-1.100	3192005
M100-110	1.100-1.200	3192006
M100-120	1.200-1.300	3192007
M100-130	1.300-1.400	3192008
M100-140	1.400-1.500	3192009
M100-150	1.500-1.600	3192010
M100-160	1.600-1.700	3192011
M100-170	1.700-1.800	3192012
M100-180	1.800-1.900	3192013
M100-190	1.900-2.000	3192014
Complete set in 1 case		3192031
Range finder 0.700-2.000		3071095
Complete set with range finder and case		3192032
Case for 15 pcs.		201321

Available on request: **M 100 Th series**

Thermometer 0+30 °C in 1 °C, filling: Hg  
Error limit: ± 0.5 °C, total length: 290 mm  
Or mercury-free with blue organic filling  
(similar to DIN),  
Thermometer error limit: ± 1 °C



# Precision density hydrometers highest accuracy class



Ref. temperature: 20 °C, Scale division: 0.0001 g/cm<sup>3</sup>

Error limit: ±0.0001 g/cm<sup>3</sup>, without thermometer

Total length: 400 mm, each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.	Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.610	3412001	0.950-0.960	3412036
0.610-0.620	3412002	0.960-0.970	3412037
0.620-0.630	3412003	0.970-0.980	3412038
0.630-0.640	3412004	0.980-0.990	3412039
0.640-0.650	3412005	0.990-1.000	3412040
0.650-0.660	3412006	1.000-1.010	3412041
0.660-0.670	3412007	1.010-1.020	3412042
0.670-0.680	3412008	1.020-1.030	3412043
0.680-0.690	3412009	1.030-1.040	3412044
0.690-0.700	3412010	1.040-1.050	3412045
0.700-0.710	3412011	1.050-1.060	3412046
0.710-0.720	3412012	1.060-1.070	3412047
0.720-0.730	3412013	1.070-1.080	3412048
0.730-0.740	3412014	1.080-1.090	3412049
0.740-0.750	3412015	1.090-1.100	3412050
0.750-0.760	3412016	1.100-1.110	3412051
0.760-0.770	3412017	1.110-1.120	3412052
0.770-0.780	3412018	1.120-1.130	3412053
0.780-0.790	3412019	1.130-1.140	3412054
0.790-0.800	3412020	1.140-1.150	3412055
0.800-0.810	3412021	1.150-1.160	3412056
0.810-0.820	3412022	1.160-1.170	3412057
0.820-0.830	3412023	1.170-1.180	3412058
0.830-0.840	3412024	1.180-1.190	3412059
0.840-0.850	3412025	1.190-1.200	3412060
0.850-0.860	3412026	1.200-1.210	3412061
0.860-0.870	3412027	1.210-1.220	3412062
0.870-0.880	3412028	1.220-1.230	3412063
0.880-0.890	3412029	1.230-1.240	3412064
0.890-0.900	3412030	1.240-1.250	3412065
0.900-0.910	3412031	1.250-1.260	3412066
0.910-0.920	3412032	1.260-1.270	3412067
0.920-0.930	3412033	1.270-1.280	3412068
0.930-0.940	3412034	1.280-1.290	3412069
0.940-0.950	3412035	1.290-1.300	3412070

Available on request: With thermometer +5+25 °C in 0.2 °C,

Filling: Hg, error limit: ± 0.2 °C, total length: 400 mm

or mercury-free with blue organic filling (similar to DIN),

Thermometer error limit: ± 0.5 °C

#### Surface tension:

Low = Class L up to 1.000 g/cm<sup>3</sup>

High = Class H above 1.000 g/cm<sup>3</sup>

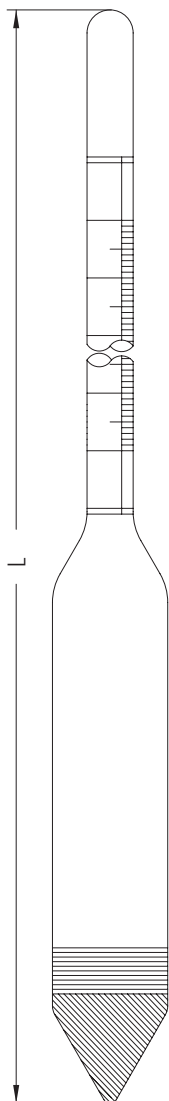
Medium = Class M on request

#### Additional order no.

...../03 with works calibration certificate

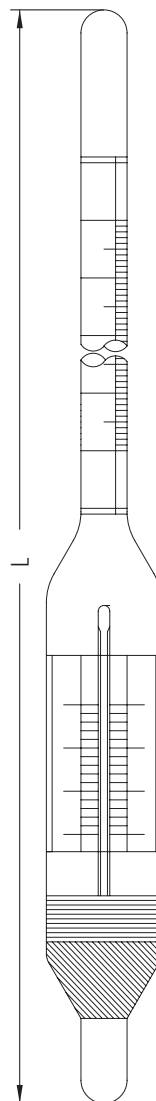
...../04 with DAkkS calibration certificate

# Density hydrometers



Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.700	3031001
0.700-0.800	3031002
0.800-0.900	3031003
0.900-1.000	3031004
1.000-1.100	3031005
1.100-1.200	3031006
1.200-1.300	3031007
1.300-1.400	3031008
1.400-1.500	3031009
1.500-1.600	3031010
1.600-1.700	3031011
1.700-1.800	3031012
1.800-1.900	3031013
1.900-2.000	3031014
Complete set with 1 case	3031031
Case for 14 pcs.	203031



Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>

**With mercury-free  
 thermometer: 0+35 °C in 1 °C,  
 Filling: blue, error limit: ± 2 °C**

Total length (L): 350 mm  
 Packed in a square plastic sleeve



Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.700	3051001
0.700-0.800	3051002
0.800-0.900	3051003
0.900-1.000	3051004
1.000-1.100	3051005
1.100-1.200	3051006
1.200-1.300	3051007
1.300-1.400	3051008
1.400-1.500	3051009
1.500-1.600	3051010
1.600-1.700	3051011
1.700-1.800	3051012
1.800-1.900	3051013
1.900-2.000	3051014

## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Density hydrometers without thermometer



Ref. temperature: 20 °C

Scale division: 0.005 g/cm<sup>3</sup>

Error limit: ±0.005 g/cm<sup>3</sup>

Total length (L): 180 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.700-0.850	3061001
0.850-1.000	3061002
1.000-1.250	3061003
1.250-1.500	3061004
1.500-1.750	3061005
1.750-2.000	3061006

Ref. temperature: 20 °C

Scale division: 0.005 g/cm<sup>3</sup>

Error limit: ±0.005 g/cm<sup>3</sup>

Total length (L): 270 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-1.300	3071042
1.300-1.600	3071053
1.600-2.000	3071054

Ref. temperature: 20 °C

Scale division: 0.005 g/cm<sup>3</sup>

Error limit: ±0.005 g/cm<sup>3</sup>

Total length (L): 300 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.700-1.000	3071041
1.000-1.500	3071043
1.500-2.000	3071044

Ref. temperature: 20 °C

Scale division: 0.010 g/cm<sup>3</sup>

Error limit: ±0.010 g/cm<sup>3</sup>

Total length (L): 300 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-2.000	3071045
2.000-2.500	3071046 *
2.500-3.000	3071047 *
3.000-3.500	3071048 *
3.500-4.000	3071049 *

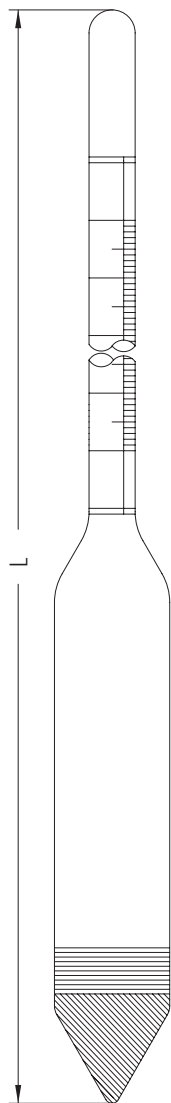
\*DAkkS calibration not possible

## Additional order no.

...../03 with works calibration certificate

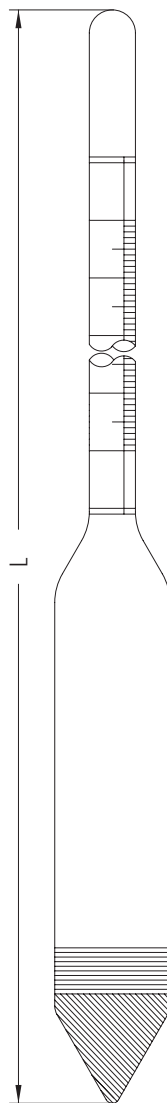
...../04 with DAkkS calibration certificate

# Density hydrometers



Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length (L): 260 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.660	3021001
0.650-0.710	3021002
0.700-0.760	3021003
0.760-0.820	3021004
0.820-0.880	3021005
0.880-0.940	3021006
0.940-1.000	3021007
1.000-1.060	3021008
1.060-1.120	3021009
1.120-1.180	3021010
1.180-1.240	3021011
1.240-1.300	3021012
1.300-1.360	3021013
1.360-1.420	3021014
1.420-1.480	3021015
1.480-1.540	3021016
1.540-1.600	3021017
1.600-1.660	3021018
1.660-1.720	3021019
1.720-1.780	3021020
1.780-1.840	3021021
1.840-1.900	3021022
1.900-1.960	3021023
1.960-2.020	3021024
Complete set with 1 case	3021041
Case for 24 pcs.	201302



Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length (L): 160 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.660	3011001
0.650-0.710	3011002
0.700-0.760	3011003
0.760-0.820	3011004
0.820-0.880	3011005
0.880-0.940	3011006
0.940-1.000	3011007
1.000-1.060	3011008
1.060-1.120	3011009
1.120-1.180	3011010
1.180-1.240	3011011
1.240-1.300	3011012
1.300-1.360	3011013
1.360-1.420	3011014
1.420-1.480	3011015
1.480-1.540	3011016
1.540-1.600	3011017
1.600-1.660	3011018
1.660-1.720	3011019
1.720-1.780	3011020
1.780-1.840	3011021
1.840-1.900	3011022
1.900-1.960	3011023
1.960-2.020	3011024
Complete set with 1 case	3011041
Case for 24 pcs.	201301

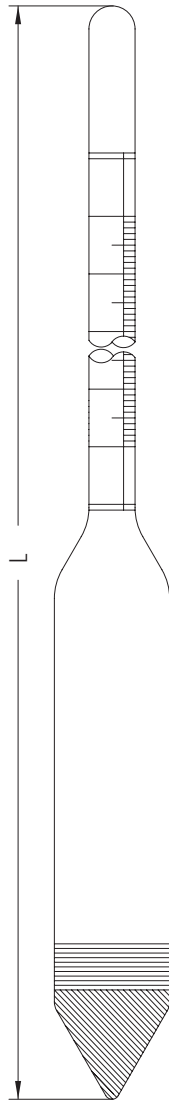
Available with mercury-free thermometer on request: Thermometer: 0+35 °C in 1 °C, filling: blue,  
 Error limit: ± 2 °C, total length: 320 mm

## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Density hydrometers



Ref. temperature: 20 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit: ±0.002 g/cm<sup>3</sup>  
 Without thermometer, total length (L): 280 mm  
 Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.800	3071001
0.800-1.000	3071002
1.000-1.200	3071003 <sup>κ</sup>
1.200-1.400	3071004 <sup>κ</sup>
1.400-1.600	3071005 <sup>κ</sup>
1.600-1.800	3071006
1.800-2.000	3071007
Complete set with 1 case	3071009
Case for 7 pcs.	201091

<sup>κ</sup> Also available as plastic version  
 (see catalogue page 50)

Available on request with mercury-free  
 thermometer: 0+35 °C in 1 °C, filling: blue  
 Error limit: ± 2 °C, total length: 330 mm

Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer, total length (L): 380 mm  
 Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.800	3071021
0.800-1.000	3071022
1.000-1.200	3071023
1.200-1.400	3071024
1.400-1.600	3071025
1.600-1.800	3071026
1.800-2.000	3071027
Complete set with 1 case	3071029
Case for 7 pcs.	201092

Available on request with mercury-free  
 thermometer: 0+35 °C in 1 °C, filling: blue  
 Error limit: ± 2 °C, total length: 400 mm

Ref. temperature: 20 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit: ±0.002 g/cm<sup>3</sup>  
 Without thermometer, total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
2.000-2.200	3402701*
2.200-2.400	3402702*
2.400-2.600	3402703*
2.600-2.800	3402704*
2.800-3.000	3402705*
3.000-3.200	3402706*
3.200-3.400	3402707*
3.400-3.600	3402708*
3.600-3.800	3402709*
3.800-4.000	3402710*

\*DAkKS calibration not possible

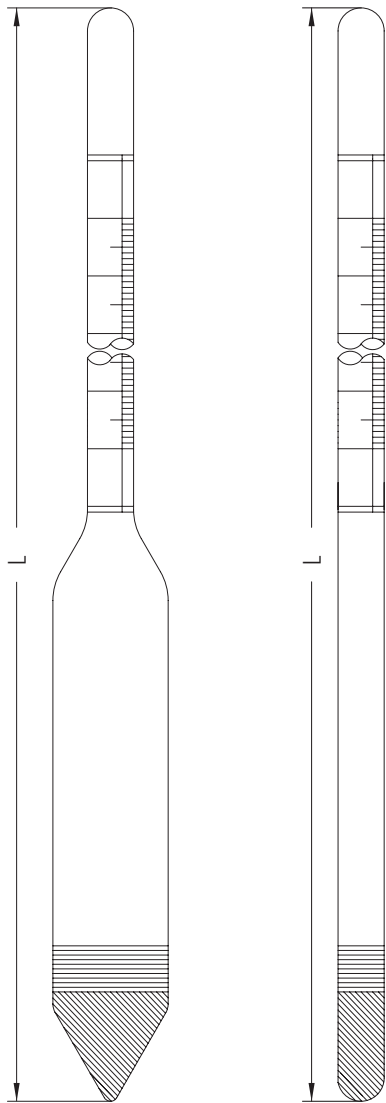
Available on request with mercury-free  
 thermometer: 0+35 °C in 1 °C, filling: blue  
 Error limit: ± 2 °C, Total length: 350 mm

## Additional order no.

...../03 with works calibration certificate

...../04 with DAkKS calibration certificate

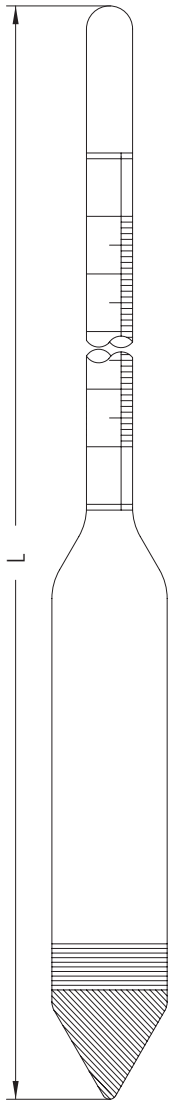
# Range finders for Density/Specific Gravity/Baumé



Each packed in a square plastic sleeve

Measuring range	Ref. temperature	Scale division	Total length (L) mm	Art.-No.
0.600-0.850	20 °C	0.005 g/cm <sup>3</sup>	240	3091001
0.850-1.100	20 °C	0.005 g/cm <sup>3</sup>	240	3091002
1.100-1.500	20 °C	0.005 g/cm <sup>3</sup>	240	3091003
1.500-2.000	20 °C	0.005 g/cm <sup>3</sup>	240	3091004
0.700-2.000	20 °C	0.100 g/cm <sup>3</sup>	160	3071091
0.600-2.000	20 °C	0.100 g/cm <sup>3</sup>	260	3021025
0.700-2.000	20 °C	0.100 g/cm <sup>3</sup>	300	3071092
0.700-2.000	20 °C	0.01/0.02 g/cm <sup>3</sup>	360	3071094
0.600-1.000 100-0 Bé	20 °C	0.010 g/cm <sup>3</sup> 1 °Bé	260	3311231
1.000-1.500 0-48 Bé	20 °C	0.005 g/cm <sup>3</sup> 0.5 °Bé	280	3311232
1.000-2.000 0-70 Bé	20 °C	0.010 g/cm <sup>3</sup> 1 °Bé	300	3311233
0.650-1.000	60/60 °F	0.010 sp/gr	150	3311229
0.650-1.000	60/60 °F	0.005 sp/gr	300	3311230
1.000-2.000	60/60 °F	0.02 sp/gr	150	3311227
1.000-2.000	60/60 °F	0.01 sp/gr	300	3311226
0.700-2.000 70-10 Bé light 0-70 Bé heavy	60/60 °F	0.010 sp/gr 1 °Bé	415	3311228

# Precision hydrometers for Specific Gravity



Ref. temperature: 60/60 °F  
 Scale division: 0.0005 sp/gr  
 Error limit: ±0.0005 sp/gr  
 Without thermometer  
 Total length (L): 325 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
0.590-0.660	3021001SG
0.640-0.710	3021002SG
0.700-0.770	3021003SG
0.760-0.830	3021004SG
0.820-0.890	3021005SG
0.880-0.950	3021006SG
0.940-1.010	3021007SG
1.000-1.070	3021008SG
1.060-1.130	3021009SG
1.120-1.190	3021010SG
1.180-1.250	3021011SG
1.240-1.310	3021012SG
1.300-1.370	3021013SG
1.360-1.430	3021014SG
1.420-1.490	3021015SG
1.480-1.550	3021016SG
1.540-1.610	3021017SG
1.600-1.670	3021018SG
1.660-1.730	3021019SG
1.720-1.790	3021020SG

Ref. temperature: 60/60 °F  
 Scale division: 0.001 sp/gr  
 Error limit: ±0.001 sp/gr  
 Without thermometer  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
0.695-0.810	3031002SG †
0.795-0.910	3031003SG †
0.895-1.000	3031004SG †

Ref. temperature: 60/60 °F  
 Scale division: 0.002 sp/gr  
 Error limit: ±0.002 sp/gr  
 Without thermometer  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.000-1.220	3071003SG † <sup>κ</sup>
1.200-1.420	3071004SG † <sup>κ</sup>
1.400-1.620	3071005SG † <sup>κ</sup>
1.600-1.820	3071006SG †
1.800-2.020	3071007SG †

<sup>κ</sup> Also available as plastic version  
 (see catalogue page 50)

Ref. temperature: 60/60 °F  
 Scale division: 0.005 sp/gr  
 Error limit: ±0.005 sp/gr  
 Without thermometer  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.000-1.600	3071043SG †
1.500-2.000	3071044SG †
2.000-2.500	3071046SG †*
2.500-3.000	3071047SG †*

\* DAkkS calibration not possible

† With mercury-free thermometer  
 available on request:  
 Thermometer: +20+120 °F in 2 °F  
 Filling: blue, error limit: ± 4 °F  
 Total length: 380 mm

Ref. temperature: 60/60 °F  
 Scale division: 0.002 sp/gr  
 Error limit: ±0.002 sp/gr  
 Without thermometer  
 Total length (L): 150 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
0.690-0.800	3031152SG
0.790-0.900	3031153SG
0.890-1.000	3031154SG

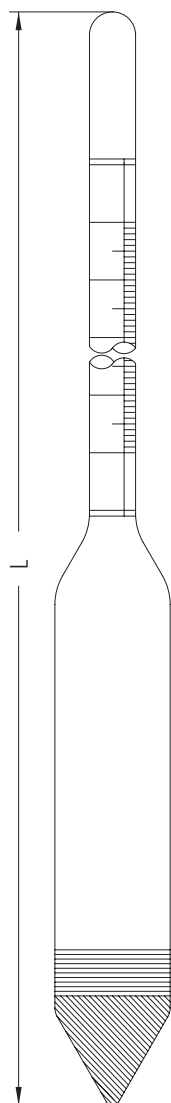
Ref. temperature: 60/60 °F  
 Scale division: 0.005 sp/gr  
 Error limit: ±0.005 sp/gr  
 Without thermometer  
 Total length (L): 150 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.000-1.225	3031165SG
1.200-1.425	3031166SG
1.400-1.625	3031167SG
1.600-1.825	3031168SG
1.800-2.025	3031169SG

## Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision density hydrometers acc. to BS 718



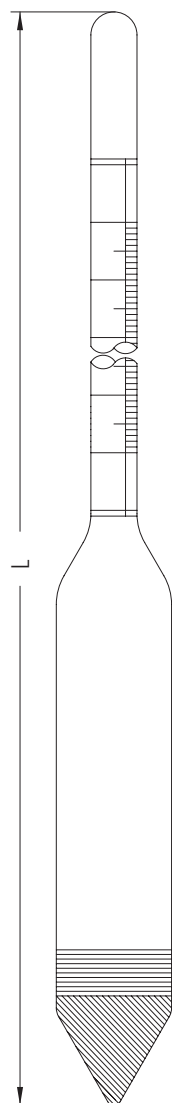
## L20 series

Ref. temperature: 15 °C  
 Scale division: 0.0002 g/cm<sup>3</sup>  
 Error limit: ±0.0002 g/cm<sup>3</sup>  
 Without thermometer  
 Total length: 335 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.620	3071201
0.620-0.640	3071202
0.640-0.660	3071203
0.660-0.680	3071204
0.680-0.700	3071205
0.700-0.720	3071206
0.720-0.740	3071207
0.740-0.760	3071208
0.760-0.780	3071209
0.780-0.800	3071210
0.800-0.820	3071101
0.820-0.840	3071102
0.840-0.860	3071103
0.860-0.880	3071104
0.880-0.900	3071105
0.900-0.920	3071106
0.920-0.940	3071107
0.940-0.960	3071108
0.960-0.980	3071109
0.980-1.000	3071110
1.000-1.020	3071111
1.020-1.040	3071112
1.040-1.060	3071113
1.060-1.080	3071114
1.080-1.100	3071115
1.100-1.120	3071116
1.120-1.140	3071117
1.140-1.160	3071118

**Surface tension:**  
 Low = Class L up to 1.000 g/cm<sup>3</sup>  
 High = Class H above 1.000 g/cm<sup>3</sup>  
 Medium = Class M on request

**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



## L50SP series

Ref. temperature: 15 °C  
 Scale division: 0.0005 g/cm<sup>3</sup>  
 Error limit: ±0.0003 g/cm<sup>3</sup>  
 Without thermometer  
 Total length: 335 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.650	3071211
0.650-0.700	3071212
0.700-0.750	3071213
0.750-0.800	3071214
0.800-0.850	3071131
0.850-0.900	3071132
0.900-0.950	3071133
0.950-1.000	3071134
1.000-1.050	3071135
1.050-1.100	3071136
1.100-1.150	3071137
1.150-1.200	3071138
1.200-1.250	3071139
1.250-1.300	3071140
1.300-1.350	3071141
1.350-1.400	3071142
1.400-1.450	3071143
1.450-1.500	3071144
1.500-1.550	3071145
1.550-1.600	3071146
1.600-1.650	3071147
1.650-1.700	3071148
1.700-1.750	3071149
1.750-1.800	3071150
1.800-1.850	3071215
1.850-1.900	3071216
1.900-1.950	3071217
1.950-2.000	3071218

**Surface tension:**  
 Low = Class L up to 1.150 g/cm<sup>3</sup>  
 High = Class H above 1.150 g/cm<sup>3</sup>  
 Medium = Class M on request

**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



# Precision density hydrometers acc. to BS 718



## **M 50 SP series**

Ref. temperature: 15 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.0006 g/cm<sup>3</sup>  
 Without thermometer  
 Total length: 270 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.650	3071321
0.650-0.700	3071322
0.700-0.750	3071323
0.750-0.800	3071324
0.800-0.850	3071151
0.850-0.900	3071152
0.900-0.950	3071153
0.950-1.000	3071154
1.000-1.050	3071155
1.050-1.100	3071156
1.100-1.150	3071157
1.150-1.200	3071158
1.200-1.250	3071159
1.250-1.300	3071160
1.300-1.350	3071161

## **S 50 SP series**

Ref. temperature: 15 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length: 190 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.650	3071241
0.650-0.700	3071242
0.700-0.750	3071243
0.750-0.800	3071244
0.800-0.850	3071181
0.850-0.900	3071182
0.900-0.950	3071183
0.950-1.000	3071184
1.000-1.050	3071185
1.050-1.100	3071186
1.100-1.150	3071187
1.150-1.200	3071188
1.200-1.250	3071189
1.250-1.300	3071190
1.300-1.350	3071191

## **M 100 series**

Ref. temperature: 15 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit: ±0.002 g/cm<sup>3</sup>  
 Without thermometer  
 Total length: 250 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.700	3071231
0.700-0.800	3071232
0.800-0.900	3071171
0.900-1.000	3071172
1.000-1.100	3071173
1.100-1.200	3071177
1.200-1.300	3071174
1.300-1.400	3071175
1.400-1.500	3071176

### **Surface tension:**

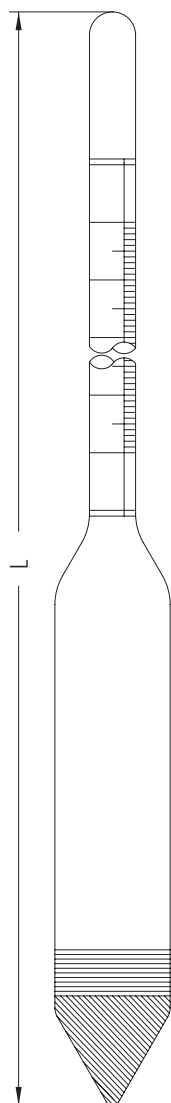
Low = Class L up to 1.000 g/cm<sup>3</sup>  
 High = Class H above 1.000 g/cm<sup>3</sup>  
 Medium = Class M on request

### **Additional order no.**

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

**Note: Hydrometers acc. to BS 734 see catalogue page 45 (Lactodensimeters).**

# Precision hydrometers acc. to ASTM E100-10 (API-Grade)

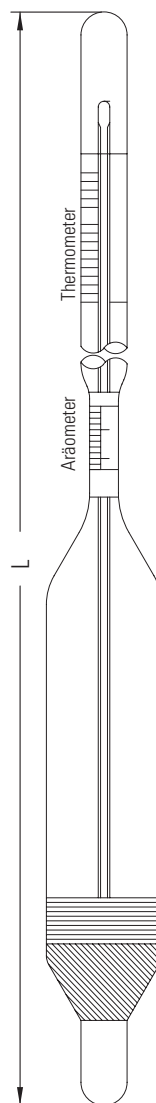


Ref. temperature: 60 °F  
 Scale division: 0.1 °API  
 Error limit: ±0.1 °API  
 Without thermometer  
 Total length (L): 330 mm  
 Packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
1H-62	-1+11	3202001
2H-62	9+21	3202002
3H-62	19+31	3202003
4H-62	29+41	3202004
5H-62	39+51	3202005
6H-62	49+61	3202006
7H-62	59+71	3202007
8H-62	69+81	3202008
9H-62	79+91	3202009
10H-62	89+101	3202010
11H-03	37+49	3202011
12H-03	64+76	3202012

Ref. temperature: 60 °F  
 Scale division: 0.1 °API  
 Error limit: ±0.1 °API  
 Without thermometer  
 Total length (L): 160 mm  
 Packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
21H-62	0+6	3202051
22H-62	5+11	3202052
23H-62	10+16	3202053
24H-62	15+21	3202054
25H-62	20+26	3202055
26H-62	25+31	3202056
27H-62	30+36	3202057
28H-62	35+41	3202058
29H-62	40+46	3202059
30H-62	45+51	3202060
31H-62	50+56	3202061
32H-62	55+61	3202062
33H-62	60+66	3202063
34H-62	65+71	3202064
35H-62	70+76	3202065
36H-62	75+81	3202066
37H-62	80+86	3202067
38H-62	85+91	3202068
39H-62	90+96	3202069
40H-62	95+101	3202070



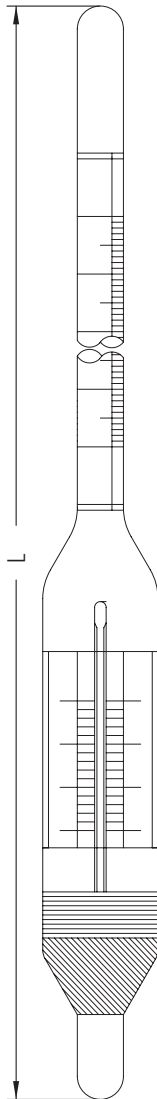
Ref. temperature: 60 °F  
 Scale division: 0.1 °API  
 Error limit: ±0.1 °API  
**With thermometer in stem:**  
**+30+220 °F in 2 °F**  
**Filling: Hg**  
**Error limit: ± 1 °F**  
 Total length (L): 380 mm  
 Packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
71H-62	-1+11	3212051
72H-62	9+21	3212052
73H-62	19+31	3212053
74H-62	29+41	3212054

**Mercury-free version  
 available on request:**  
 with blue organic filling  
 (similar to ASTM),  
 thermometer error limit: ± 2 °F

**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# API hydrometers with thermometer



Ref. temperature: 60 °F  
 Scale division: 0.2 °API  
 Error limit:  $\pm 0.2$  °API

**With mercury-free thermometer:**  
**0+150 °F in 2 °F, filling: blue**  
**Error limit:  $\pm 4$  °F**

Total length (L): 200 mm  
 Each packed in a square plastic sleeve



Measuring range °API	Art.-No.
-1+11	3212060
9+21	3212061
19+31	3212062
29+41	3212063
39+51	3212064
49+61	3212065
59+71	3212066
69+81	3212067

Ref. temperature: 60 °F  
 Scale division: 0.5 °API  
 Error limit:  $\pm 0.5$  °API

**With mercury-free thermometer:**  
**0+150 °F in 2 °F, filling: blue**  
**Error limit:  $\pm 4$  °F**

Total length (L): 380 mm  
 Each packed in a square plastic sleeve



Measuring range °API	Art.-No.
10+45	3212070
45+90	3212071

Ref. temperature: 60 °F  
 Scale division: 0.2 °API  
 Error limit:  $\pm 0.2$  °API

**With mercury-free thermometer:**  
**0+150 °F in 2 °F, filling: blue**  
**Error limit:  $\pm 4$  °F**

Total length (L): 380 mm  
 Each packed in a square plastic sleeve



Measuring range °API	Art.-No.
10+30	3212072
20+40	3212073
30+50	3212074
40+60	3212075
50+70	3212076
60+80	3212077
70+90	3212078

## Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to ASTM E 100-10 (API-Grade)



Ref. temperature: 60 °F  
 Scale division: 0.1 °API, error limit: ±0.1 °API  
**With thermometer: 0+150 °F in 2 °F**  
**Filling: Hg, Error limit: ± 1 °F**  
 Total length (L): 380 mm  
 Each packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
51HL-62	-1+11	3122036
52HL-62	9+21	3122037
53HL-62	19+31	3122038
54HL-62	29+41	3122039
55HL-62	39+51	3122040
56HL-62	49+61	3122041
57HL-62	59+71	3122042
58HL-62	69+81	3122043
59HL-62	79+91	3122044
60HL-62	89+101	3122045

Ref. temperature: 60 °F  
 Scale division: 0.1 °API, error limit: ±0.1 °API  
**With thermometer: +30+180 °F in 2 °F**  
**Filling: Hg, error limit: ± 1 °F**  
 Total length (L): 380 mm  
 Each packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
51HM-62	-1+11	3122046
52HM-62	9+21	3122047
53HM-62	19+31	3122048
54HM-62	29+41	3122049
55HM-62	39+51	3122050
56HM-62	49+61	3122051
57HM-62	59+71	3122052
58HM-62	69+81	3122053
59HM-62	79+91	3122054
60HM-62	89+101	3122055

Ref. temperature: 60 °F  
 Scale division: 0.1 °API, error limit: ±0.1 °API  
**With thermometer: 0+100 °F in 0.5 °F,**  
**Filling: Hg, error limit: ± 0.5 °F**  
 Total length (L): 400 mm  
 Each packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
255H-03	37+49	3122066
258H-03	64+76	3122067

Ref. temperature: 60 °F  
 Scale division: 0.1 °API, error limit: ±0.1 °API  
**With thermometer: +60+220 °F in 2 °F**  
**Filling: Hg, Error limit: ± 1 °F**  
 Total length (L): 380 mm  
 Each packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
51HH-62	-1+11	3122056
52HH-62	9+21	3122057
53HH-62	19+31	3122058
54HH-62	29+41	3122059
55HH-62	39+51	3122060
56HH-62	49+61	3122061
57HH-62	59+71	3122062
58HH-62	69+81	3122063
59HH-62	79+91	3122064
60HH-62	89+101	3122065

#### Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to ASTM E 2995-14



## API-Grade

Ref. temperature: 60 °F

Scale division: 0.1 °API

Error limit:  $\pm 0.1$  °API

**With mercury-free thermometer:**

**0+150 °F in 2 °F, filling: blue**

**Error limit:  $\pm 2$  °F**

Total length (L): 380 mm

Each packed in a square plastic sleeve

Type	Measuring range °API	Art.-No.
S550HL-14	-6+6	3122135S
S551HL-14	-1+11	3122036S
S552HL-14	9+21	3122037S
S553HL-14	19+31	3122038S
S554HL-14	29+41	3122039S
S555HL-14	39+51	3122040S
S556HL-14	49+61	3122041S
S557HL-14	59+71	3122042S
S558HL-14	69+81	3122043S
S559HL-14	79+91	3122044S
S560HL-14	89+101	3122045S
S561HL-14	37+49	3122136S
S562HL-14	64+76	3122137S

## Density

Ref. temperature: 15 °C

Scale division: 0.5 kg/m<sup>3</sup>

Error limit:  $\pm 0.5$  kg/m<sup>3</sup>

**With mercury-free thermometer:**

**-20+65 °C in 1 °C, filling: blue**

**Error limit:  $\pm 1$  °C**

Total length (L): 380 mm

Each packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
S500HL-14	600-650	3222111S
S501HL-14	650-700	3222112S
S502HL-14	700-750	3222113S
S503HL-14	750-800	3222114S
S504HL-14	800-850	3222115S
S505HL-14	850-900	3222116S
S506HL-14	900-950	3222117S
S507HL-14	950-1000	3222118S
S508HL-14	1000-1050	3222119S
S509HL-14	1050-1100	3222120S
S510HL-14	775-825	3222345S



## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to ASTM E 100-10 (Density)



Ref. temperature: 15 °C

Scale division: 0.5 kg/m<sup>3</sup>

Error limit: ±0.5 kg/m<sup>3</sup>

**With thermometer: -20+65 °C in 1 °C**

**Filling: Hg, error limit: ± 1 °C**

Total length (L): 380 mm

Each packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
300HL-82	600-650	3222111
301HL-82	650-700	3222112
302HL-82	700-750	3222113
303HL-82	750-800	3222114
304HL-82	800-850	3222115
305HL-82	850-900	3222116
306HL-82	900-950	3222117
307HL-82	950-1000	3222118
308HL-82	1000-1050	3222119
309HL-82	1050-1100	3222120

Ref. temperature: 15 °C

Scale division: 0.5 kg/m<sup>3</sup>

Error limit: ±0.5 kg/m<sup>3</sup>

**With thermometer: +20+105 °C in 1 °C**

**Filling: Hg, error limit: ± 1 °C**

Total length (L): 380 mm

Each packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
300HH-82	600-650	3222131
301HH-82	650-700	3222132
302HH-82	700-750	3222133
303HH-82	750-800	3222134
304HH-82	800-850	3222135
305HH-82	850-900	3222136
306HH-82	900-950	3222137
307HH-82	950-1000	3222138
308HH-82	1000-1050	3222139
309HH-82	1050-1100	3222140

Ref. temperature: 15 °C

Scale division: 0.5 kg/m<sup>3</sup>

Error limit: ±0.5 kg/m<sup>3</sup>

**With thermometer: 0+85 °C in 1 °C**

**Filling: Hg, error limit: ± 1 °C**

Total length (L): 380 mm

Each packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
300HM-82	600-650	3222121
301HM-82	650-700	3222122
302HM-82	700-750	3222123
303HM-82	750-800	3222124
304HM-82	800-850	3222125
305HM-82	850-900	3222126
306HM-82	900-950	3222127
307HM-82	950-1000	3222128
308HM-82	1000-1050	3222129
309HM-82	1050-1100	3222130

Ref. temperature: 15 °C

Scale division: 0.5 kg/m<sup>3</sup>

Error limit: ±0.5 kg/m<sup>3</sup>

**With thermometer: -10+40 °C in 0.2 °C**

**Filling: Hg, error limit: ± 0.2 °C**

Total length (L): 400 mm

Each packed in a square plastic sleeve

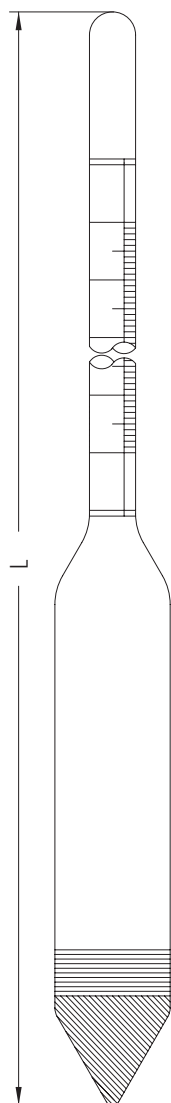
Type	Measuring range kg/m <sup>3</sup>	Art.-No.
345H-03	775-825	3222345

#### Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

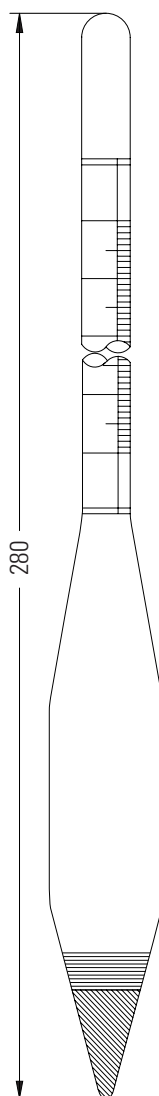
# Precision hydrometers acc. to ASTM E 100-10



## Density

Ref. temperature: 15 °C  
 Scale division: 0.5 kg/m<sup>3</sup>  
 Error limit: ±0.5 kg/m<sup>3</sup>  
 Without thermometer  
 Total length (L): 330 mm  
 Packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
311H-82	600-650	3222151
312H-82	650-700	3222152
313H-82	700-750	3222153
314H-82	750-800	3222154
315H-82	800-850	3222155
316H-82	850-900	3222156
317H-82	900-950	3222157
318H-82	950-1000	3222158
319H-82	1000-1050	3222159
320H-82	1050-1100	3222160
321H-03	775-825	3222161



## For soil measurements

Ref. temperature: 68/68 °F  
 Scale division: 0.001 sp/gr  
 Error limit: ±0.001 sp/gr  
 Without thermometer  
 Total length (L): 280 mm  
 Packed in a square plastic sleeve

Type	Measuring range sp/gr	Art.-No.
151H-05	0.995-1.038	3231031

## For soil measurements

Ref. temperature: 68/68 °F  
 Scale division: 1 g/L  
 Error limit: ± 1 g/L  
 Without thermometer  
 Total length (L): 280 mm  
 Packed in a square plastic sleeve

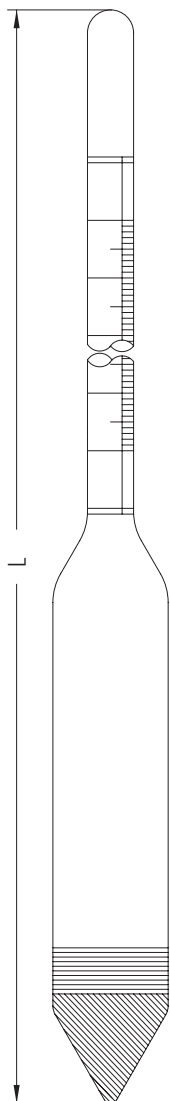
Type	Measuring range g/L	Art.-No.
152H-05	-5+60	3231032

**Note: Hydrometers for liquid gas see catalogue page 25 (liquid gas hydrometers).**

### Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to ASTM E 100-10



## **Specific gravity/relative density**

Ref. temperature: 60/60 °F  
 Scale division: 0.0005 sp/gr  
 Error limit:  $\pm 0.0005$  sp/gr  
 Without thermometer  
 Total length (L): 330 mm  
 Each packed in a square plastic sleeve

Type	Measuring range sp/gr	Art.-No.
82H-62	0.650-0.700	3222051
83H-62	0.700-0.750	3222052
84H-62	0.750-0.800	3222053
85H-62	0.800-0.850	3222054
86H-62	0.850-0.900	3222055
87H-62	0.900-0.950	3222056
88H-62	0.950-1.000	3222057
89H-62	1.000-1.050	3222058
90H-62	1.050-1.100	3222059

## **For alcohol**

98H-62	0.950-1.000	3222060
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## **For heavy liquids**

111H-62	1.000-1.050	3222061
112H-62	1.050-1.100	3222062
113H-62	1.100-1.150	3222063
114H-62	1.150-1.200	3222064
115H-62	1.200-1.250	3222065
116H-62	1.250-1.300	3222066
117H-62	1.300-1.350	3222067
118H-62	1.350-1.400	3222068
119H-62	1.400-1.450	3222069
120H-62	1.450-1.500	3222070

## **Specific gravity/relative density**

Ref. temperature: 60/60 °F  
 Scale division: 0.001 sp/gr  
 Error limit:  $\pm 0.001$  sp/gr  
 Without thermometer  
 Total length (L): 260 mm  
 Each packed in a square plastic sleeve

Type	Measuring range sp/gr	Art.-No.
102H-62	0.650-0.700	3222001
103H-62	0.700-0.750	3222002
104H-62	0.750-0.800	3222003
105H-62	0.800-0.850	3222004
106H-62	0.850-0.900	3222005
107H-62	0.900-0.950	3222006
108H-62	0.950-1.000	3222007
125H-62	1.000-1.050	3222011
126H-62	1.050-1.100	3222012
127H-62	1.100-1.150	3222013
128H-62	1.150-1.200	3222014
129H-62	1.200-1.250	3222015
130H-62	1.250-1.300	3222016
131H-62	1.300-1.350	3222017
132H-62	1.350-1.400	3222018
133H-62	1.400-1.450	3222019
134H-62	1.450-1.500	3222020
135H-62	1.500-1.550	3222021
136H-62	1.550-1.600	3222022
137H-62	1.600-1.650	3222023
138H-62	1.650-1.700	3222024
139H-62	1.700-1.750	3222025
140H-62	1.750-1.800	3222026
141H-62	1.800-1.850	3222027

## **Additional order no.**

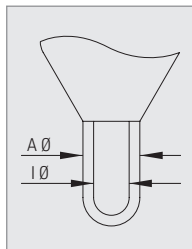
...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



# Precision hydrometers for liquid gas



**Bulb with protective tubing**



## **DIN 12804**

Ref. temperature: 15 °C

Scale division: 0.0005 g/cm<sup>3</sup>

Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: 0+30 °C in 0.5 °C**

**Filling: Hg, error limit: ± 0.5 °C**

Bulb with protective tubing

Working pressure 1500 kPa

Total length (L): 410 mm

Each packed in a square plastic sleeve

Type	Measuring range g/cm <sup>3</sup>	Art.-No.
GAS 1	0.500-0.550	3242051
GAS 2	0.550-0.600	3242052
GAS 3	0.600-0.650	3242053

## **ASTME 100-10**

Ref. temperature: 15 °C

Scale division: 1 kg/m<sup>3</sup>

Error limit: ± 1 kg/m<sup>3</sup>

**With thermometer: 0+35 °C in 0.5 °C**

**Filling: Hg, error limit: ± 0.5 °C**

Bulb with protective tubing

Working pressure 1400 kPa

Total length (L): max 387 mm

Each packed in a square plastic sleeve

Type	Measuring range kg/m <sup>3</sup>	Art.-No.
310H	500-650	3222180

## **ASTME 100-10**

Ref. temperature: 60/60 °F

Scale division: 0.001 sp/gr

Error limit: ±0.001 sp/gr

**With thermometer: +30+90 °F in 1 °F**

**Filling: Hg, error limit: ± 0.5 °F**

Bulb with protective tubing

Working pressure min. 200 Psi

Total length (L): 387 mm

Each packed in a square plastic sleeve

Type	Measuring range sp/gr	Art.-No.
101H-03	0.500-0.650	3252061

Ref. temperature: 15/4 °C

Scale division: 0.001 g/cm<sup>3</sup>

Error limit: ±0.001 g/cm<sup>3</sup>

**With thermometer: 0+30 °C in 1 °C**

**Filling: Hg, error limit: ± 1 °C**

Bulb with protective tubing

Working pressure 1500 kPa

Total length (L): 410 mm

Each packed in a square plastic sleeve

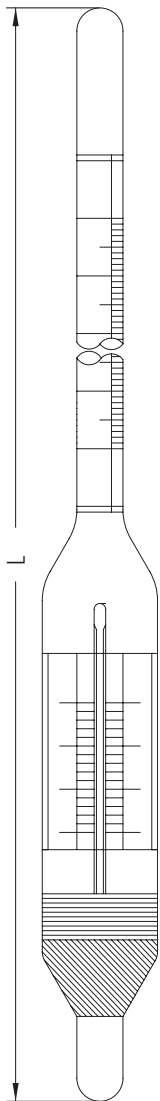
Type	Measuring range g/cm <sup>3</sup>	Art.-No.
1	0.500-0.650	3242056
2	0.500-0.550	3242057
3	0.550-0.600	3242058
4	0.500-0.600	3242071

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers for mineral oil



**For customs authorities**

Ref. temperature: 15 °C  
 Scale division: 0.0005 g/cm<sup>3</sup>  
 Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: -10+60 °C in 0.5 °C**

**Filling: Hg, error limit: ± 0.5 °C**

Total length (L): 410 mm  
 Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.595-0.655	3072021
0.645-0.705	3072022
0.695-0.755	3072023
0.745-0.805	3072024
0.795-0.855	3072025
0.845-0.905	3072026
0.895-0.955	3072027
0.945-1.005	3072028

Ref. temperature: 15 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>

**With thermometer: -10+60 °C in 1 °C**

**Filling: Hg, error limit: ± 1 °C**

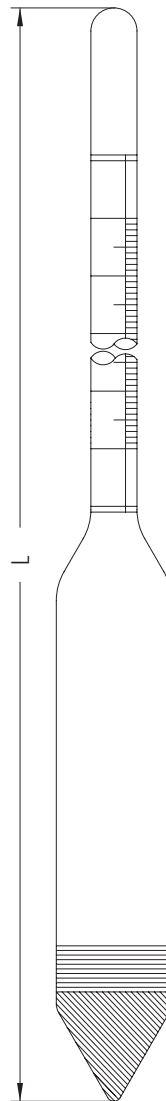
Total length (L): 410 mm  
 Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.610-0.700	3212001 <sup>†</sup>
0.680-0.770	3212002 <sup>†</sup>
0.750-0.840	3212003 <sup>†</sup>
0.820-0.910	3212004 <sup>†</sup>
0.890-0.990	3212005 <sup>†</sup>
0.980-1.100	3212006 <sup>†</sup>

**<sup>†</sup> Mercury-free version available on request:**

With blue organic filling,  
 thermometer error limit: ± 2 °C

**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



Ref. temperature: 15 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.600-0.650	3252040
0.650-0.700	3252041
0.700-0.750	3252042
0.750-0.800	3252043
0.800-0.850	3252044
0.850-0.900	3252045
0.900-0.950	3252046
0.950-1.000	3252047
1.000-1.050	3252048

Ref. temperature: 15 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Without thermometer  
 Total length (L): 425 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.680-0.770	3252021
0.750-0.840	3252022
0.820-0.910	3252023

# Precision hydrometers acc. to Baumé



Ref. temperature: 15 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 260 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-1	3271121
0-2	3271122
0-3	3271123
0-5	3271124

Ref. temperature: 15 °C  
 Scale division: 0.5 Bé, error limit: ±0.5 Bé  
 Without thermometer  
 Total length (L): 220 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-10	3281201
10-20	3281202
20-30	3281203
30-40	3281204
40-50	3281205
50-60	3281206
60-70	3281207

Ref. temperature: 15 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 270 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-10	3211071
10-20	3211072
20-30	3211073
30-40	3211074
40-50	3211075
50-60	3211076
60-70	3211077

Ref. temperature: 20 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 260 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-1	3271121-20
0-2	3271122-20
0-3	3271123-20
0-5	3271124-20

Ref. temperature: 20 °C  
 Scale division: 0.5 Bé, error limit: ±0.5 Bé  
 Without thermometer  
 Total length (L): 220 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-10	3281201-20
10-20	3281202-20
20-30	3281203-20
30-40	3281204-20
40-50	3281205-20
50-60	3281206-20
60-70	3281207-20

Ref. temperature: 20 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 270 mm  
 Each packed in a square plastic sleeve

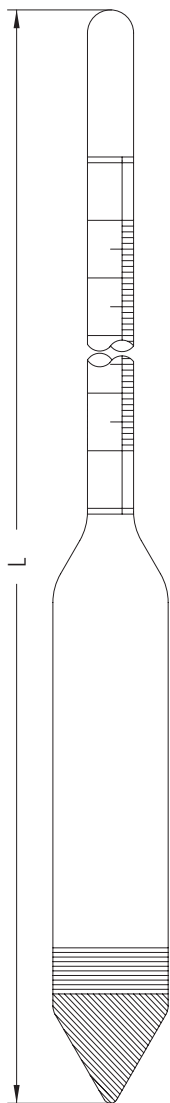
Measuring range Bé	Art.-No.
0-10	3211071-20
10-20	3211072-20
20-30	3211073-20
30-40	3211074-20
40-50	3211075-20
50-60	3211076-20
60-70	3211077-20

**With mercury-free thermometer available on request: 0+35 °C in 1 °C.**

## Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to Baumé



Ref. temperature: 15 °C  
 Scale division: 0.5 Bé, Error limit: ±0.5 Bé  
 Without thermometer  
 Total length (L): 220 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-15	3281221
15-30	3281222
30-45	3281223
45-60	3281224
60-75	3281225

Ref. temperature: 15 °C  
 Scale division: 0.1 Bé, Error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-15	3261011
15-30	3261012
30-45	3261013
45-60	3261014
60-75	3261015

Ref. temperature: 15 °C  
 Scale division: 0.2 Bé, Error limit: ±0.2 Bé  
 Without thermometer  
 Total length (L): 270 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-20	3261171
10-30	3261172
20-40	3261173
30-50	3261174
40-60	3261175
50-70	3261176

Ref. temperature: 20 °C  
 Scale division: 0.5 Bé, Error limit: ±0.5 Bé  
 Without thermometer  
 Total length (L): 220 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-15	3281221-20
15-30	3281222-20
30-45	3281223-20
45-60	3281224-20
60-75	3281225-20

Ref. temperature: 20 °C  
 Scale division: 0.1 Bé, Error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-15	3261011-20
15-30	3261012-20
30-45	3261013-20
45-60	3261014-20
60-75	3261015-20

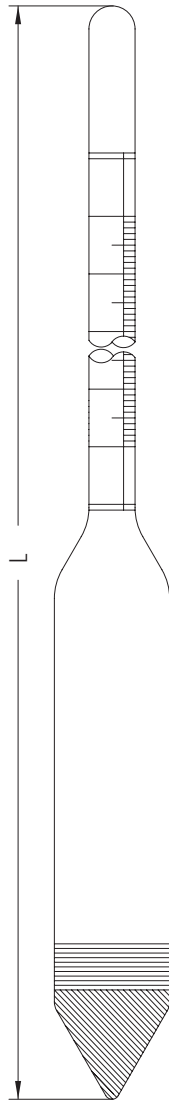
Ref. temperature: 20 °C  
 Scale division: 0.2 Bé, Error limit: ±0.2 Bé  
 Without thermometer  
 Total length (L): 270 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-20	3261171-20
10-30	3261172-20
20-40	3261173-20
30-50	3261174-20
40-60	3261175-20
50-70	3261176-20

**With mercury-free thermometer available on request: 0+35 °C in 1 °C.**

**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision hydrometers acc. to Baumé



Ref. temperature: 15 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-20	3261031
10-30	3261032
20-40	3261033
30-50	3261034
40-60	3261035
50-70	3261036

Ref. temperature: 15 °C  
 Scale division: 1 Bé, error limit: ±1 Bé  
 Without thermometer  
 Total length (L): 250 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-30	3261041
30-60	3261042
0-35	3261044
0-50	3261051
0-70	3261052

Ref. temperature: 60 °F  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-12	3281290
9-21	3281291
19-31	3281292
29-41	3281293
39-51	3281294
49-61	3281295

Ref. temperature: 20 °C  
 Scale division: 0.1 Bé, error limit: ±0.1 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-20	3261031-20
10-30	3261032-20
20-40	3261033-20
30-50	3261034-20
40-60	3261035-20
50-70	3261036-20

Ref. temperature: 20 °C  
 Scale division: 1 Bé, error limit: ±1 Bé  
 Without thermometer  
 Total length (L): 250 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-30	3261041-20
30-60	3261042-20
0-35	3261044-20
0-50	3261051-20
0-70	3261052-20

Ref. temperature: 60 °F  
 Scale division: 0.5 Bé, error limit: ±0.5 Bé  
 Without thermometer  
 Total length (L): 300 mm  
 Each packed in a square plastic sleeve

Measuring range Bé	Art.-No.
0-25	3281296 <sup>κ</sup>
0-35	3281297

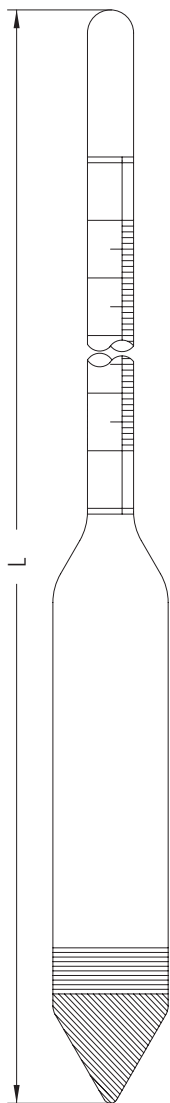
<sup>κ</sup> Also available as plastic version  
 (see catalogue page 51)

**With mercury-free thermometer available on request: 0+35 °C in 1 °C.**

## Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision saccharometers (%mas/°Brix) without thermometer



Ref. temperature: 20 °C, Total length (L): 270 mm  
Scale division: 0.2 %mas/°Brix  
Error limit: ±0.2 %mas/°Brix  
Each packed in a square plastic sleeve

Measuring range %mas/°Brix	Art.-No.
0-10	3302410
10-20	3302411
20-30	3302412
30-40	3302413
40-50	3302414
50-60	3302415
60-70	3302416
70-80	3302417 *
80-90	3302418 *

Ref. temperature: 20 °C, Total length (L): 270 mm  
Scale division: 0.2 %mas/°Brix  
Error limit: ±0.2 %mas/°Brix  
Each packed in a square plastic sleeve

Measuring range %mas/°Brix	Art.-No.
0-15	3281301 <sup>κ</sup>
15-30	3281302 <sup>κ</sup>
30-45	3281303 <sup>κ</sup>
45-60	3281304 <sup>κ</sup>
60-75	3281305 <sup>κ</sup>
75-90	3281306 <sup>κ</sup> *

<sup>κ</sup> Also available as plastic version  
(see catalogue page 51)

Ref. temperature: 20 °C, Total length (L): 250 mm  
Scale division: 1 %mas/°Brix  
Error limit: ±1 %mas/°Brix  
Each packed in a square plastic sleeve

Measuring range %mas/°Brix	Art.-No.
0-30	3281121
30-60	3281122
60-90	3281123 *

#### Additional order no.

...../03 with works calibration certificate  
...../04 with DAkkS calibration certificate

Ref. temperature: 20 °C, Total length (L): 280 mm  
Scale division: 0.1 %mas/°Brix  
Error limit: ±0.1 %mas/°Brix  
Each packed in a square plastic sleeve

Measuring range %mas/°Brix	Art.-No.
0-10	3281011
10-20	3281012
20-30	3281013
30-40	3281014
40-50	3281015
50-60	3281016
60-70	3281017
70-80	3281018 *
80-90	3281019 *

Ref. temperature: 20 °C, Total length (L): 300 mm  
Scale division: 0.1 %mas/°Brix  
Error limit: ±0.1 %mas/°Brix  
Each packed in a square plastic sleeve

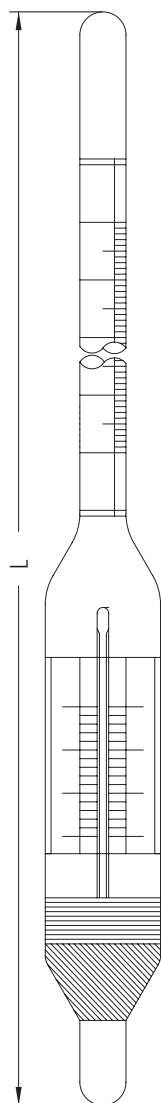
Measuring range %mas/°Brix	Art.-No.
0-15	3281031
15-30	3281032
30-45	3281033
45-60	3281034
60-75	3281035
75-90	3281036 *

Ref. temperature: 20 °C, Total length (L): 220 mm  
Scale division: 1 %mas/°Brix  
Error limit: ±1 %mas/°Brix  
Each packed in a square plastic sleeve

Measuring range %mas/°Brix	Ref. temperature (°C)	Art.-No.
0-30	70	3302422
30-60	70	3302423
60-90	70	3302424 *
0-30	75	3302425
30-60	75	3302426
60-90	75	3302427 *
0-30	80	3302428
30-60	80	3302429
60-90	80	3302430 *
0-30	90	3302431
30-60	90	3302432
60-90	90	3302433 *

\* DAkkS calibration not possible

# Precision saccharometers (%mas/°Brix)



Ref. temperature: 20 °C  
Scale division: 0.1 %mas/°Brix,  
error limit: ±0.1 %mas/°Brix

**With mercury-free thermometer:**  
**0+35 °C in 1 °C, with correction scale**  
**Filling: blue, error limit: ± 2 °C**

Total length (L): 350 mm  
Each packed in a square plastic sleeve



Measuring range %mas/°Brix	Art.-No.
0-10	3281051
10-20	3281052
20-30	3281053
30-40	3281054
40-50	3281055
50-60	3281056
60-70	3281057
70-80	3281058*
80-90	3281059*

\* DAkkS calibration not possible

Ref. temperature: 20 °C  
Scale division: 0.1 °Brix, Error limit: ±0.1 °Brix

**With mercury-free thermometer:**  
**0+50 °C in 1 °C, with correction scale**  
**Filling: blue, error limit: ± 2 °C**

Total length (L): 330 mm  
Each packed in a square plastic sleeve



Measuring range °Brix	Art.-No.
-5+5	3281060
0-12	3281061
9-21	3281062
19-31	3281063
29-41	3281064
39-51	3281065
49-61	3281066
59-71	3281067

Ref. temperature: 20 °C  
Scale division: 0.5 °Brix  
Error limit: ±0.5 °Brix

**With mercury-free thermometer:**  
**0+50 °C in 1 °C, with correction scale**  
**Filling: blue, error limit: ± 2 °C**

Total length (L): 330 mm  
Each packed in a square plastic sleeve



Measuring range °Brix	Art.-No.
0-35	3281068



Ref. temperature: 20 °C  
Scale division: 0.1 °Brix  
Error limit: ±0.1 °Brix  
Without thermometer  
Total length (L): 300 mm  
Packed in a square plastic sleeve

Measuring range °Brix	Art.-No.
-5+5	3281090
0-12	3281091
9-21	3281092
19-31	3281093
29-41	3281094
39-51	3281095
49-61	3281096
59-71	3281097

Ref. temperature: 20 °C  
Scale division: 0.5 °Brix  
Error limit: ±0.5 °Brix  
Without thermometer  
Total length (L): 300 mm  
Packed in a square plastic sleeve

Measuring range °Brix	Art.-No.
0-35	3281098 <sup>κ</sup>

<sup>κ</sup> Also available as plastic version  
(see catalogue page 51)

Additional order no.
...../03 with works calibration certificate
...../04 with DAkkS calibration certificate

# Precision saccharometers with thermometer for breweries (%mas)



## **Final attenuation saccharometers**

Ref. temperature: 20 °C  
Scale division: 0.05 %mas  
Error limit:  $\pm 0.05$  %mas

**With thermometer: +8+26 °C in 0.2 °C**

**With correction scale, filling: Hg**

**Error limit:  $\pm 0.2$  °C**

Total length (L): 400 mm

Each packed in a square plastic sleeve

Measuring range %mas	Art.-No.
0-3	3292071
3-6	3292072
6-9	3292073
9-12	3292074
12-15	3292075
15-18	3292076
18-21	3292077

## **Final attenuation saccharometers**

Ref. temperature: 20 °C  
Scale division: 0.05 %mas  
Error limit:  $\pm 0.05$  %mas

**With thermometer: +5+30 °C in 0.5 °C**

**With correction scale, filling: Hg**

**Error limit:  $\pm 0.5$  °C**

Total length (L): 290 mm

Each packed in a square plastic sleeve

Measuring range %mas	Art.-No.
0-3	3292061
3-6	3292062
6-9	3292063
9-12	3292064
12-15	3292065
15-18	3292066
18-21	3292067

## **Hartong malt saccharometers for beer wort**

Ref. temperature: 20 °C  
Scale division: 0.01 %mas  
Error limit:  $\pm 0.01$  %mas

**With thermometer: +8+26 °C in 0.2 °C**

**With correction scale, filling: Hg**

**Error limit:  $\pm 0.2$  °C**

Total length (L): 400 mm

Each packed in a square plastic sleeve

Measuring range %mas	Art.-No.
1-2	3292041
2-3	3292042
3-4	3292043
4-5	3292044
5-6	3292045
6-7	3292046
7-8	3292047
8-9	3292048
9-10	3292049

**With mercury-free thermometer with blue organic filling available on request.**

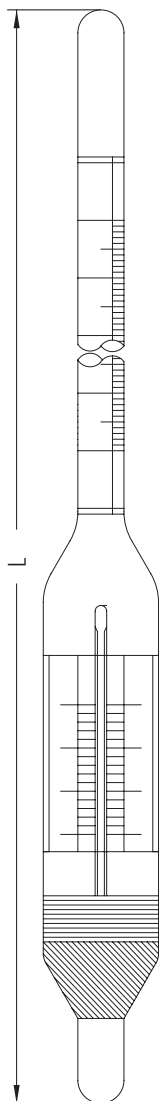
### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate



# Precision saccharometers and hydrometers for breweries



## **Pocket saccharometers**

Ref. temperature: 20 °C

Scale division: 0.1 %mas

Error limit:  $\pm 0.1$  %mas

**With thermometer: 0+30 °C in 1 °C**

**With correction scale, filling: Hg**

**Error limit:  $\pm 1$  °C**

Total length (L): 250 mm

Each packed in a square plastic sleeve

Measuring range %mas	Art.-No.
0-7	3292011
7-14	3292012
14-21	3292013

## **Density hydrometer for beer and wort**

Ref. temperature: 20 °C

Scale division: 0.0002 g/cm<sup>3</sup>

Error limit:  $\pm 0.0002$  g/cm<sup>3</sup>

**With thermometer: +8+26 °C in 0.2 °C**

**With correction scale, filling: Hg**

**Error limit:  $\pm 0.2$  °C**

Total length (L): 400 mm

Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.998-1.003	3291081
1.002-1.015	3291082
1.015-1.027	3291083
1.025-1.039	3291084
1.037-1.050	3291085

**With mercury-free thermometer with blue organic filling available on request.**



## **Lauter saccharometers**

Ref. temperature: 70 °C

Scale division: 0.5 %mas

Error limit:  $\pm 0.5$  %mas

Without thermometer

Total length (L): 290 mm

Packed in a square plastic sleeve

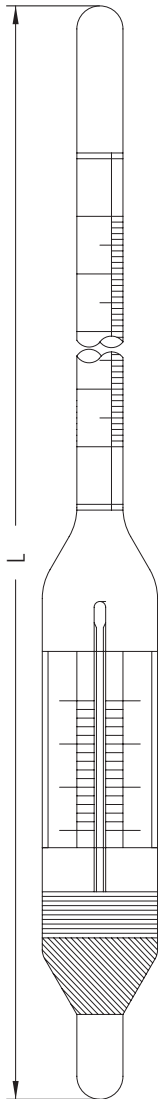
Measuring range %mas	Art.-No.
0-5	3291071
0-10	3291072
0-18	3291073

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision saccharometers with thermometer for breweries



## **Brewhouse saccharometers for beer and wort**

Ref. temperature: 20 °C

Reading above

Scale division: 0.1 %mas

Error limit: ±0.1 %mas

**With thermometer: +3+26 °C in 0.2 °C**

**With correction scale, filling: Hg**

**Error limit: ± 0.2 °C**

Each packed in a square plastic sleeve

Measuring range %mas	Total length mm	Art.-No.
0-10	380	3291041
10-20	380	3291042
20-30	380	3291043
0-15	440	3291045
0-20	470	3291046
0-24	500	3191047
10-25	380	3291049
0-5	400	3292004
5-10	400	3292005
10-15	400	3292006
15-20	400	3292007
20-25	400	3292008

## **Brewhouse saccharometers for beer and wort acc. to Plato**

Ref. temperature: 20 °C

Reading above

Scale division: 0.1 °Plato

Error limit: ±0.1 °Plato

**With mercury-free thermometer:**

**0+30 °C in 1 °C, with correction scale**

**Filling: blue, error limit: ± 2 °C**

Each packed in a square plastic sleeve

Measuring range °Plato	Total length mm	Art.-No.
8-16	285	3292101
16-24	285	3292102
0-8	330	3292103
8-16	330	3292104
16-24	330	3292105
0-14	405	3292106
0-10	430	3292107
10-20	430	3292108
0-5	300	3292109
5-10	300	3292110
10-15	300	3292111
15-20	300	3292112
20-25	300	3292113



**With mercury-free thermometer with blue organic filling available on request.**

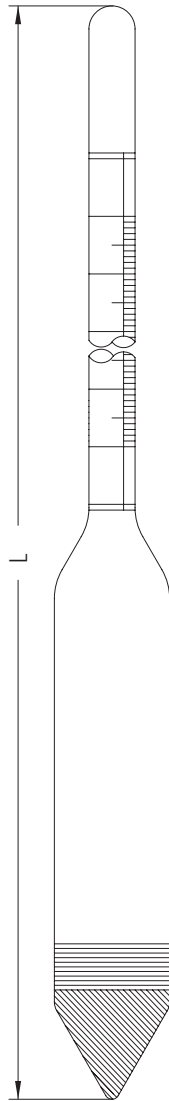
### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision alcoholmeters without thermometer

## Class I + II EG-OIML



### Class I EG-OIML

Ref. temperature: 20 °C  
 Scale division: 0.1 % Vol  
 Error limit:  $\pm 0.1$  % Vol  
 Without thermometer  
 Total length (L): 480 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302085
10-20	3302086
20-30	3302087
30-40	3302088
35-45	3302089
40-50	3302090
50-60	3302091
60-70	3302092
70-80	3302093
80-90	3302094
90-100	3302095
95-103	3302096

### Class II EG-OIML

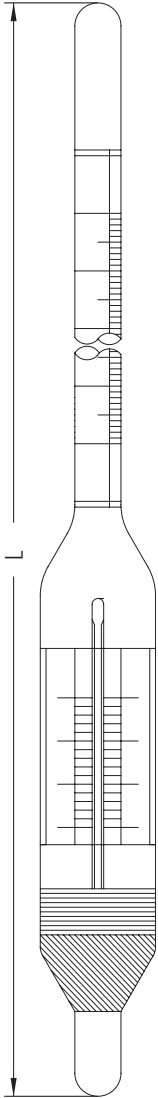
Ref. temperature: 20 °C  
 Scale division: 0.1 % Vol  
 Error limit:  $\pm 0.1$  % Vol  
 Without thermometer  
 Total length (L): 350 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302061
10-20	3302062
20-30	3302063
30-40	3302064
35-45	3302065
40-50	3302066
50-60	3302067
60-70	3302068
70-80	3302069
80-90	3302070
90-100	3302071
95-103	3302072



**Additional order no.**  
 ...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Precision alcoholmeters with thermometer Class II + III EG-OIML



## Class II EG-OIML

Ref. temperature: 20 °C

Scale division: 0.1 % Vol

Error limit:  $\pm 0.1$  % Vol

**With thermometer:**

**+5+25 °C in 0.2 °C**

**Filling: Hg**

**Accuracy:  $\pm 0.2$  °C**

Total length (L): 390 mm Packed  
in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302073
10-20	3302074
20-30	3302075
30-40	3302076
35-45	3302077
40-50	3302078
50-60	3302079
60-70	3302080
70-80	3302081
80-90	3302082
90-100	3302083
95-103	3302084



## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

## Class III EG-OIML

Ref. temperature: 20 °C

Scale division: 0.1 % Vol

Error limit:  $\pm 0.1$  % Vol

**With thermometer:**

**+5+25 °C in 0.2 °C**

**Filling: Hg**

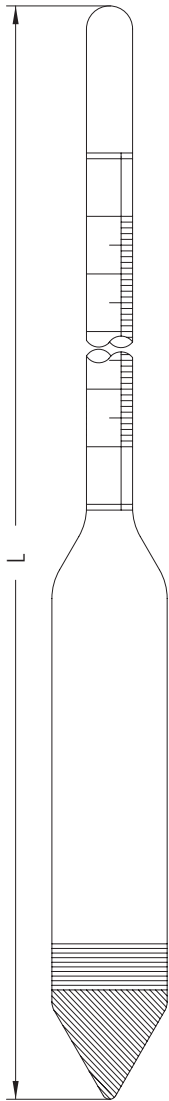
**Accuracy:  $\pm 0.2$  °C**

Total length (L): 330 mm  
Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-5	3302001
5-10	3302002
10-15	3302003
15-20	3302004
20-25	3302005
25-30	3302006
30-35	3302007
35-40	3302008
40-45	3302009
45-50	3302010
50-55	3302011
55-60	3302012
60-65	3302013
65-70	3302014
70-75	3302015
75-80	3302016
80-85	3302017
85-90	3302018
90-95	3302019
95-100	3302020
98-103	3302021



# Standard alcoholmeters



Ref. temperature: 20 °C  
 Scale division: 0.1 % Vol  
 Error limit:  $\pm 0.1$  % Vol  
 Without thermometer  
 Total length (L): 320 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302165
10-20	3302166
20-30	3302167
30-40	3302168
40-50	3302169
50-60	3302170
60-70	3302271
70-80	3302272
80-90	3302273
90-100	3302274

Ref. temperature: 20 °C  
 Scale division: 1 % Vol  
 Error limit:  $\pm 1$  % Vol  
 Without thermometer  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-100	3402908

## **Alcoholmeters acc. to Richter and Tralles**

Ref. temperature: 20 °C  
 Scale division: 1 %mas (Richter)  
 and 1 % Vol (Tralles)  
 Error limit:  $\pm 1$  %mas / % Vol  
 Without thermometer  
 Total length (L): 260 mm  
 Packed in a square plastic sleeve

Measuring range %mas/ % Vol	Art.-No.
0-100	3312073

### **Additional order no.**

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



Ref. temperature: 20 °C  
 Scale division: 0.1 % Vol  
 Error limit:  $\pm 0.1$  % Vol  
**With thermometer: 0+30 °C, in 0.5 °C**  
**Filling: blue, accuracy:  $\pm 1$  °C**  
 Total length (L): 380 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302181
10-20	3302182
20-30	3302183
30-40	3302184
40-50	3302185
50-60	3302186
60-70	3302187
70-80	3302188
80-90	3302189
90-100	3302190

Ref. temperature: 20 °C  
 Scale division: 1 % Vol  
 Error limit:  $\pm 1$  % Vol  
**With thermometer: 0+30 °C in 1 °C**  
**Filling: blue, accuracy:  $\pm 2$  °C**  
 Total length (L): 340 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-100	3402918

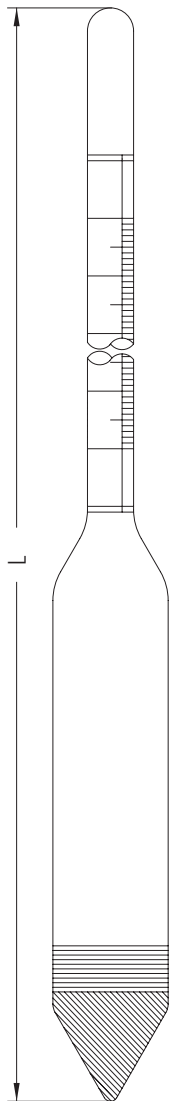
## **Alcoholmeters acc. to Richter and Tralles**

Ref. temperature: 20 °C  
 Scale division: 1 %mas (Richter)  
 and 1 % Vol (Tralles)  
 Error limit:  $\pm 1$  %mas / % Vol  
**With thermometer: 0+30 °C in 1 °C**  
**Filling: blue, accuracy  $\pm 2$  °C**  
 Total length (L): 320 mm  
 Packed in a square plastic sleeve

Measuring range %mas/ % Vol	Art.-No.
0-100	3312075



# Standard alcoholmeters without thermometer



Ref. temperature: 20 °C  
 Scale division: 0.2 % Vol  
 Error limit:  $\pm 0.2$  % Vol  
 Without thermometer  
 Total length (L): 340 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-20	3302101
20-40	3302102
40-60	3302103
60-80	3302104
80-100	3302105

## **Range finders for alcoholmeters**

Ref. temperature: 20 °C  
 Scale division: 1 % Vol  
 Error limit:  $\pm 1$  % Vol  
 Without thermometer  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
50-100	3302140
0-100	3302141

### **Additional order no.**

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Standard alcoholmeters with thermometer



Ref. temperature: 20 °C  
Scale division: 0.2 % Vol  
Error limit:  $\pm 0.2$  % Vol

**With thermometer: -5+35 °C in 0.5 °C**

**Filling: Hg, accuracy:  $\pm 0.5$  °C**

Total length (L): 360 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
30-50	3302106
50-70	3302107

Ref. temperature: 20 °C  
Scale division: 0.2 % Vol  
Error limit:  $\pm 0.2$  % Vol

**With thermometer: 0+30 °C in 0.5 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 480 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
65-100	3302171

Ref. temperature: 20 °C  
Scale division: 0.5 % Vol  
Error limit:  $\pm 0.5$  % Vol

**With thermometer: 0+30 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 480 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
10-67	3302172
35-85	3302173

Ref. temperature: 20 °C  
Scale division: 0.2 % Vol  
Error limit:  $\pm 0.2$  % Vol

**With thermometer: -5+35 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 360 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
30-50	3302108
50-70	3302109

Ref. temperature: 20 °C  
Scale division: 1 % Vol  
Error limit:  $\pm 1$  % Vol

**With thermometer: 0+30 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 480 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-100	3302175

Ref. temperature: 20 °C  
Scale division: 0.1 % Vol  
Error limit:  $\pm 0.1$  % Vol

**With thermometer: 0+30 °C in 0.2 °C**

**Filling: Hg, accuracy:  $\pm 0.2$  °C**

Total length (L): 480 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
90-100	3302176

**With mercury-free thermometer available on request.**

## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Standard alcoholmeters with thermometer



## **Pocket alcoholmeters**

Ref. temperature: 20 °C

Scale division: 0.2 % Vol

Error limit:  $\pm 0.2$  % Vol

**With thermometer: -5+35 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 250 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-10	3302155

Ref. temperature: 20 °C

Scale division: 0.5 % Vol

Error limit:  $\pm 0.5$  % Vol

**With thermometer: -5+35 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 250 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-20	3302156
20-45	3302157
40-70	3302158
70-100	3302159

Ref. temperature: 20 °C

Scale division: 1 % Vol

Error limit:  $\pm 1$  % Vol

**With thermometer: -5+35 °C in 1 °C**

**Filling: Hg, accuracy:  $\pm 1$  °C**

Total length (L): 250 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-70	3302160

## **Lutter probes with thermometer**

Ref. temperature: 20 °C

Scale division: 0.1 % Vol

Error limit:  $\pm 0.1$  % Vol

**With thermometer: +15+25 °C in 0.2 °C**

**Filling: Hg, accuracy:  $\pm 0.2$  °C**

Total length (L): 240 mm

Each packed in a square plastic sleeve

Measuring range % Vol	Art.-No.
0-3	3302214
3-6	3302215
6-9	3302216
6-10	3302217

**With mercury-free thermometer available on request.**

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate



# Alcohol tester, complete

Ref. temperature: 20 °C

Scale division: 1 % Vol

Error limit:  $\pm 1$  % Vol

**With thermometer: -5+35 °C in 1 °C**

**Filling: blue, accuracy:  $\pm 2$  °C**

Total length: 190 mm, complete with:

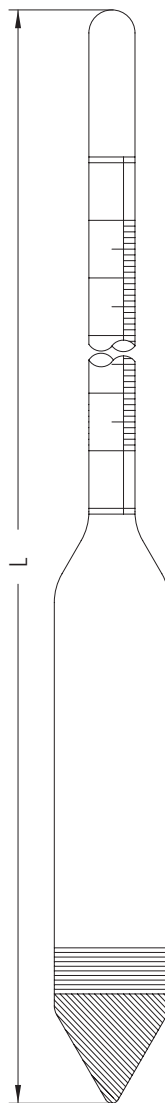
glass tube 250 x 21 mm, rubber suction bulb,

rubber plug with suction tube 60 x 6 mm

Single packed in box

Measuring range % Vol	Art.-No.
0-40	3302500

# Alcoholmeters acc. to Proof



## IRS scales

### (International Revenue Scale)

Ref. temperature: 60 °F,

Scale division: 1 % Proof

Error limit:  $\pm 1$  % Proof

Total length (L): 230 mm

Packed in a square plastic sleeve

IRS size	Measuring range % Proof	Art.-No.
A	0-100	3302601

Ref. temperature: 60 °F,

Scale division: 0.5 % Proof

Error limit:  $\pm 0.5$  % Proof

Total length (L): 230 mm

Packed in a square plastic sleeve

IRS size	Measuring range % Proof	Art.-No.
B	80-120	3302602
C	100-140	3302603
D	130-170	3302604
E	160-206	3302605

Ref. temperature: 60 °F,

Scale division: 0.2 % Proof

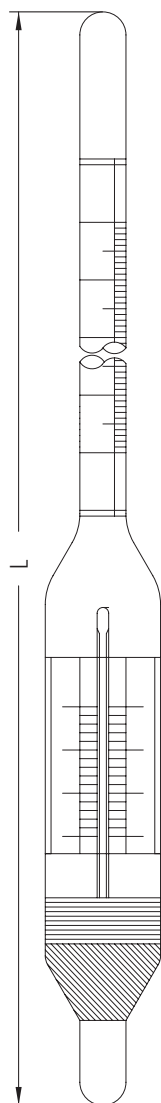
Error limit:  $\pm 0.2$  % Proof

Total length (L): 305 mm

Packed in a square plastic sleeve

IRS size	Measuring range % Proof	Art.-No.
F	0-20	3302606
G	20-40	3302607
H	40-60	3302608
I	60-80	3302609
K	75-95	3302610
L	90-110	3302611
M	105-125	3302612
N	125-145	3302613
P	145-165	3302614
Q	165-185	3302615
R	185-205	3302616

# Precision hydrometers for must of fruits and grapes



## **Mustimeter (% Vol + density)**

Ref. temperature: 20 °C

With double scale

Scale division: 0.5 % Vol

Error limit:  $\pm 0.5$  % Vol

Scale division: 0.001 g/cm<sup>3</sup>

Error limit:  $\pm 0.001$  g/cm<sup>3</sup>

**With thermometer: -5+35 °C in 1 °C**

**Filling: blue, error limit:  $\pm 2$  °C**

Total length (L): 340 mm

Each packed in a square plastic sleeve

Measuring ranges		Art.-No.
g/cm <sup>3</sup>	% Vol	
0.985-1.130	3-18	3311079

## **Hydrometers for juice and must**

Ref. temperature: 20 °C

Scale division: 0.001 g/cm<sup>3</sup>

Error limit:  $\pm 0.001$  g/cm<sup>3</sup>

**With thermometer: 0+35 °C in 1 °C**

**Filling: Hg, error limit:  $\pm 1$  °C**

Total length (L): 350 mm

Each packed in a square plastic sleeve

Measuring range	Art.-No.
g/cm <sup>3</sup>	
1.000-1.130	3311072

## **Hydrometers for determination of extracts**

Ref. temperature: 20 °C

Scale division: 0.0002 g/cm<sup>3</sup>

Error limit:  $\pm 0.0002$  g/cm<sup>3</sup>

**With thermometer: +10+25 °C in 0.2 °C**

**Filling: Hg, Error limit:  $\pm 0.2$  °C**

Total length (L): 380 mm

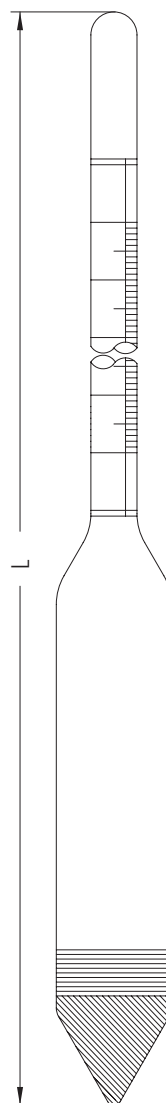
Each packed in a square plastic sleeve

Measuring range	Art.-No.
g/cm <sup>3</sup>	
0.980-1.000	3311074
1.000-1.020	3311075
1.020-1.040	3311076
1.040-1.060	3311077
1.060-1.080	3311078

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate



## **Mustimeter (% Vol + density)**

Ref. temperature: 20 °C

With double scale

Scale division: 0.5 % Vol

Error limit:  $\pm 0.5$  % Vol

Scale division: 0.001 g/cm<sup>3</sup>

Error limit:  $\pm 0.001$  g/cm<sup>3</sup>

Without thermometer

Total length (L): 270 mm

Each packed in a square plastic sleeve

Measuring ranges		Art.-No.
g/cm <sup>3</sup>	% Vol	
0.985-1.130	3-18	3311080

## **Hydrometers for juice and must**

Ref. temperature: 20 °C

Scale division: 0.001 g/cm<sup>3</sup>

Error limit:  $\pm 0.001$  g/cm<sup>3</sup>

Without thermometer

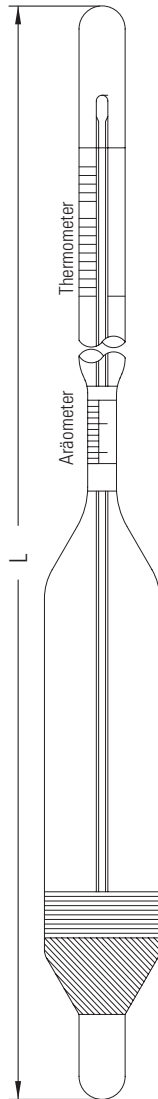
Total length (L): 300 mm

Each packed in a square plastic sleeve

Measuring range	Art.-No.
g/cm <sup>3</sup>	
1.000-1.130	3311071 <sup>k</sup>

<sup>k</sup> Also available as plastic version  
(see catalogue page 50)

# Precision hydrometers for dairies with thermometer in stem



## **Thermo-Lactodensimeter acc. to Gerber**

Reading above, Scale division: 0.0005 g/cm<sup>3</sup>, error limit: ±0.0005 g/cm<sup>3</sup>

**With mercury-free thermometer in stem: +10+30 °C in 0.5 °C,**

**Filling: blue, error limit: ±1 °C**

Each packed in a square plastic sleeve



Measuring range g/cm <sup>3</sup>	Ref. temperature °C	Total length (L) mm	Art.-No.
1.025-1.036	15	370	3302320S
1.025-1.036	20	370	3302320S-20
1.020-1.040	15	320	3302321S
1.020-1.040	20	320	3302321S-20

## **Thermo-Lactodensimeter acc. to Quevenne**

Reading above, Scale division: 0.001 sp/gr, error limit: ±0.001 sp/gr,

**With mercury-free thermometer in stem: 0+40 °C in 1 °C,**

**Filling: blue, error limit: ±2 °C**

Each packed in a square plastic sleeve



Measuring ranges sp/gr	Quevenne	Ref. temperature °C	Total length (L) mm	Art.-No.
1.015-1.040	15-40	15	270	3302341
1.015-1.040	15-40	20	270	3302341-20

## **Version acc. to DIN 10290**

Ref. temperature: 20 °C

Reading above

Scale division: 0.0005 g/cm<sup>3</sup>

Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: +10+30 °C in 0.5 °C,**

**Filling: Hg, accuracy: ±0.5 °C**

Total length (L): 300 mm

Each packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.020-1.040	3302401

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers for dairies with thermometer in body



## **Thermo-Lactodensimeter acc. to Gerber**

Ref. temperature: 15 °C

Reading above

Scale division: 0.0005 g/cm<sup>3</sup>

Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: 0+40 °C in 1 °C**

**Filling: blue, error limit: ±2 °C**

Total length (L): 230 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.025-1.036	3302323S
1.020-1.040	3302324S

## **Thermo-Lactodensimeter standard version**

Ref. temperature: 15 °C

Reading above

Scale division: 0.0005 g/cm<sup>3</sup>

Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: 0+35 °C in 1 °C**

**Filling: blue, error limit: ±2 °C**

Total length (L): 260 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.015-1.040	3302311

## **Thermo-Lactodensimeter acc. to Gerber**

Ref. temperature: 20 °C

Reading above

Scale division: 0.0005 g/cm<sup>3</sup>

Error limit: ±0.0005 g/cm<sup>3</sup>

**With thermometer: 0+40 °C in 1 °C**

**Filling: blue, error limit: ±2 °C**

Total length (L): 230 mm

Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.025-1.036	3302323S-20
1.020-1.040	3302324S-20



## **Thermo-Lactodensimeter for yoghurt and cocoa**

Ref. temperature: 20 °C

Reading above

Scale division: 0.001 g/cm<sup>3</sup>

Error limit: ±0.001 g/cm<sup>3</sup>

**With thermometer: 0+35 °C in 1 °C**

**Filling: blue, error limit: ±2 °C**

Total length (L): 240 mm

Packed in a square plastic sleeve

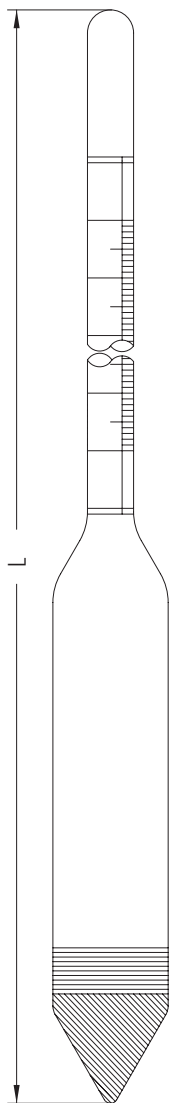
Measuring range g/cm <sup>3</sup>	Art.-No.
1.030-1.060	3302373

### **Additional order no.**

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers for dairies without thermometer



## Lactodensimeter acc. to DIN 10293/BS 734/Gerber/for condensed milk

Reading above, each packed in a square plastic sleeve

Type	Ref. temperature °C	Measuring range g/cm <sup>3</sup>	Scale g/cm <sup>3</sup>	Error limit: g/cm <sup>3</sup>	Total length (L) mm	Art.-No.
Gerber	20	1.020-1.040	0.0005	0.0005	230	3302153
Gerber	15	1.020-1.040	0.0005	0.0005	230	3302153-15
For condensed milk	20	1.000-1.240	0.002	0.002	280	3302382
For condensed milk	20	1.040-1.080	0.001	0.001	280	3302383
DIN 10293	20	1.014-1.030	0.0002	0.0002	240	3302371
BS734	20	1.025-1.035	0.0002	0.0002	240	3071011
BS734	20	1.025-1.035	0.0005	0.0005	215	3071012
BS734	20	1.015-1.025	0.0002	0.0002	240	3071014
BS734	20	1.015-1.025	0.0005	0.0005	215	3071015

## Lactodensimeter acc. to Quevenne

Reading above, each packed in a square plastic sleeve

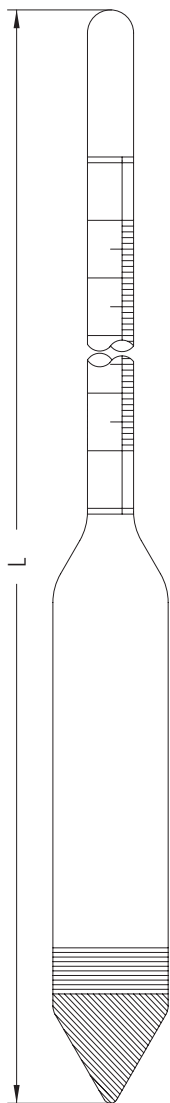
Ref. temperature °C	Measuring ranges Quevenne	sp/gr	Scale sp/gr	Error limit: sp/gr	Total length (L) mm	Art.-No.
15	15-40	1.015-1.040	0.001	0.001	210	3302331
20	15-40	1.015-1.040	0.001	0.001	210	3302331-20

### Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Precision hydrometers for seawater



## Precision version density

Ref. temperature: 25/4 °C  
 Scale division: 0.0001 g/cm<sup>3</sup>  
 Error limit: ±0.0001 g/cm<sup>3</sup>  
 Green colour field: 1.022-1.024  
 Total length (L): 350 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.018-1.028	3311097

## Precision version density with conformity certificate

Ref. temperature: 20 °C  
 Scale division: 0.0005 g/cm<sup>3</sup>  
 Error limit: ±0.0005 g/cm<sup>3</sup>  
 Total length (L): 335 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.990-1.040	335000

Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Packed in a square plastic sleeve

Meas. range g/cm <sup>3</sup>	Total length mm	Art.-No.
1.000-1.035	160	3311091
1.000-1.040	200	3311092
1.000-1.040	250	3311093 <sup>K</sup>

<sup>K</sup> Also available as plastic version  
 (see catalogue page 50)

## Precision version specific gravity

Ref. temperature: 25/25 °C  
 Scale division: 0.0001 sp/gr  
 Error limit: ±0.0001 sp/gr  
 Blue colour field: 1.025-1.027  
 Total length (L): 350 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.018-1.028	3311098

Ref. temperature: 84/84 °F  
 Scale division: 0.001 sp/gr  
 Error limit: ±0.001 sp/gr  
 Total length (L): 150 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.000-1.040	3311094

## Precision version density

Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>

**With thermometer: 0+30  
 in 1 °C, filling: blue  
 Error limit: ±2 °C**

Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
0.995-1.040	3311099

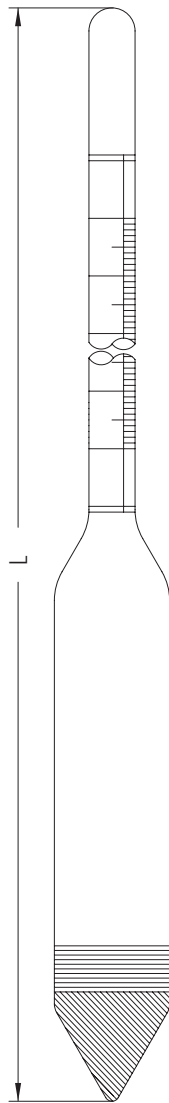


## Additional order no.

...../03 with works calibration certificate

...../04 with DAkkS calibration certificate

# Special hydrometers



## **Salinometer (Marine model)**

Ref. temperature: 90 °C  
 Scale division: 0.2 lbs  
 Error limit:  $\pm 0.2$  lbs  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range lbs	Art.-No.
0-4/32	3311026

## **Common salt acc. to Bischoff**

Ref. temperature: 15 °C  
 Scale division: 0.5 %mas  
 Error limit:  $\pm 0.5$  %mas  
 Total length (L): 270 mm  
 Packed in a square plastic sleeve

Measuring range %mas	Art.-No.
0-27	3311281 <sup>κ</sup>

<sup>κ</sup> Also available as plastic version  
 (see catalogue page 50)

## **Special hydrometers for urine acc. to Vogel**

Ref. temperature: 20 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit:  $\pm 0.002$  g/cm<sup>3</sup>  
 Total length (L): 90 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-1.060	3311212

## **Brinometer**

Ref. temperature: 15 °C  
 Scale division: 1 °Brine  
 Error limit:  $\pm 1$  °Brine  
 Total length (L): 260 mm  
 Packed in a square plastic sleeve

Measuring range °Brine	Art.-No.
0-100	3311111 <sup>κ</sup>

<sup>κ</sup> Also available as plastic version  
 (see catalogue page 50)

## **Saltwater**

Ref. temperature: 20 °C  
 Scale division: 0.5 Bé  
 Error limit:  $\pm 0.5$  Bé  
 Total length (L): 270 mm  
 Packed in a square plastic sleeve

Measuring range Baumé	Art.-No.
0-26	3311025

## **Special hydrometers for urine acc. to Vogel**

Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit:  $\pm 0.001$  g/cm<sup>3</sup>  
 Total length (L): 150 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-1.060	3311211

## **Special hydrometers for Latex**

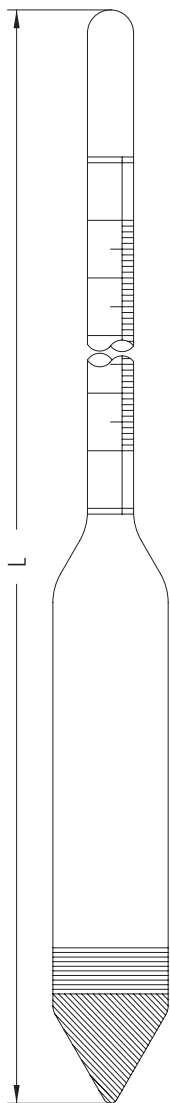
Ref. temperature: 84 °F  
 Scale division: 1 g/l  
 Error limit:  $\pm 1$  g/l  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range g/l	Art.-No.
0-60	3311031

### **Additional order no.**

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate

# Diverse special hydrometers



Ref. temperature: 20 °C  
 Scale division: 0.5 %mas  
 Error limit:  $\pm 0.5$  %mas  
 Total length (L): 270 mm  
 Each packed in a square plastic sleeve

Type	Meas. range % mas	Art.-No.
Ammonia	0-35	3311241
Potassium hydroxide solution	0-30	3311271
Sodium hydroxide	0-10	3311300
Sodium hydroxide	0-27	3311301
Sodium hydroxide	25-50	3311302
Phosphoric acid	0-31	3311311
Nitric acid	0-47	3311331
Nitric acid	45-96	3311332
Hydrochloric acid	0-40	3311341
Hydrochloric acid	0-10	3311342
Sulphuric acid	0-45	3311351
Sulphuric acid	45-94	3311352

## Acc. Casagrande DIN 18123 / BS 1377

Ref. temperature: 20 °C  
 Scale division: 0.0005 g/cm<sup>3</sup>  
 Error limit:  $\pm 0.0005$  g/cm<sup>3</sup>  
 Total length (L): 350 mm  
 Each packed in a square plastic sleeve

Meas. range g/cm <sup>3</sup>	Art.-No.
0.995-1.030	3311121

Ref. temperature: 20 °C  
 Scale division: 1 %mas  
 Error limit:  $\pm 1$  %mas  
 Total length (L): 280 mm  
 Each packed in a square plastic sleeve

Type	Meas. range % mas	Art.-No.
Acetic acid	0-75	3311251

Ref. temperature: 20 °C  
 Scale division: 1 %mas  
 Error limit:  $\pm 1$  %mas  
 Total length (L): 150 mm  
 Each packed in a square plastic sleeve

Type	Meas. range % mas	Art.-No.
Hydrogen peroxide	0-30	3311221

### Additional order no.

...../03 with works calibration certificate  
 ...../04 with DAkkS calibration certificate



## Cylindrical stands for hydrometers

Cylinder with foot made of DURAN glass  
Without graduation

Height mm	Ø mm	Art.-No.
250	60	4401020
300	40	4401030
400	40	4401040
450	65	4401045
500	50	4401050

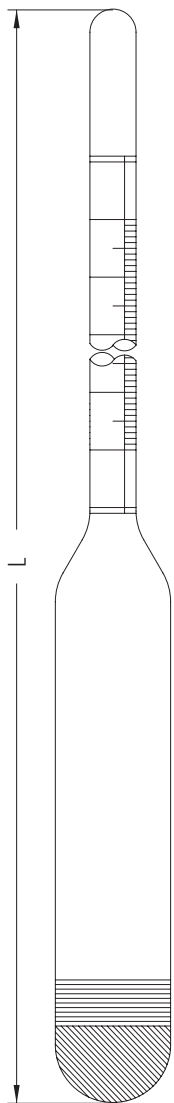
## Hydrometer for testing accumulators



Ref. temperature: 20 °C  
Scale division: 0.005 g/cm<sup>3</sup>  
Error limit: ± 0.005 g/cm<sup>3</sup>  
Complete with: glass tube,  
rubber suction bulb,  
rubber plug with suction tube  
Total length: 328 mm  
Single packed in box

Measuring range g/cm <sup>3</sup>	Art.-No.
1.080-1.300	3401021

# Hydrometers made of plastic



## Density measurement

Ref. temperature: 20 °C  
 Scale division: 0.002 g/cm<sup>3</sup>  
 Error limit: ±0.002 g/cm<sup>3</sup>  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-1.220	3001220
1.200-1.420	3001420
1.400-1.620	3001620

## Wine scale acc. to Oechsle

Ref. temperature: 20 °C  
 Scale divisions: 0.001 g/cm<sup>3</sup>, 1 °Oechsle  
 Error limits: ±0.001 g/cm<sup>3</sup>, ±1 °Oechsle  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring ranges g/cm <sup>3</sup>	°Oechsle	Art.-No.
1.000-1.130	0-130	3002596

## Specific gravity

Ref. temperature: 20 °C  
 Scale division: 0.002 sp/gr  
 Error limit: ±0.002 sp/gr  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range sp/gr	Art.-No.
1.000-1.220	3002540
1.200-1.420	3002541
1.400-1.620	3002542

## For seawater

Ref. temperature: 20 °C  
 Scale division: 0.001 g/cm<sup>3</sup>  
 Error limit: ±0.001 g/cm<sup>3</sup>  
 Total length (L): 250 mm  
 Packed in a square plastic sleeve

Measuring range g/cm <sup>3</sup>	Art.-No.
1.000-1.040	3001040

## For brine solutions

### Saturation of NaCl

Ref. temperature: 20 °C  
 Scale division: 1 °Brine  
 Error limit: ±1 °Brine  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range °Brine	Art.-No.
0-100	3002511

### Common salt

Ref. temperature: 20 °C  
 Scale division: 0.2 %mas  
 Error limit: ±0.2 %mas  
 Total length (L): 300 mm  
 Packed in a square plastic sleeve

Measuring range %mas	Art.-No.
0-26.4	30025112



### Quality features of plastic hydrometers

- Measuring device suitable for foods (HACCP)
- Unbreakable (no glass breakage)

### Additional order no.:

...../03 with works calibration certificate

# Hydrometers made of plastic



## Hydrometers acc. to Baumé

Ref. temperature: 15 °C

Scale division: 0.2 Bé

Error limit: ±0.2 Bé

Each packed in a square plastic sleeve

Measuring range Bé	Total length mm	Art.-No.
0-25	300	3002525
0-12	250	3002501
9-21	250	3002502
19-31	250	3002503
29-41	250	3002504
39-51	250	3002505
49-61	250	3002506
59-71	300	3002507

## Hydrometers acc. to Baumé

Ref. temperature: 20 °C

Scale division: 0.2 Bé

Error limit: ±0.2 Bé

Each packed in a square plastic sleeve

Measuring range Bé	Total length mm	Art.-No.
0-12	250	3002501-20
9-21	250	3002502-20
19-31	250	3002503-20
29-41	250	3002504-20
39-51	250	3002505-20
49-61	250	3002506-20
59-71	300	3002507-20

## Saccharometers %mas/Brix

Ref. temperature: 20 °C

Scale division: 0.2 %mas/Brix

Error limit: ±0.2 %mas/Brix

Total length (L): 250 mm

Packed in a square plastic sleeve

Measuring range %mas/Brix	Art.-No.
0-15	3000015
15-30	3001530
30-45	3003045
45-60	3004560
60-75	3006075
75-90	3007590

## Saccharometers %mas/Brix

Ref. temperature: 20 °C

Scale division: 0.5 %mas/Brix

Error limit: ±0.5 %mas/Brix

Total length (L): 300 mm

Packed in a square plastic sleeve

Measuring range %mas/Brix	Art.-No.
0-35	3002523
0-50	3002595



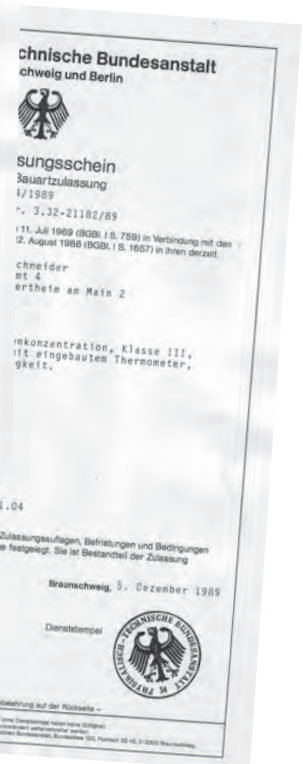
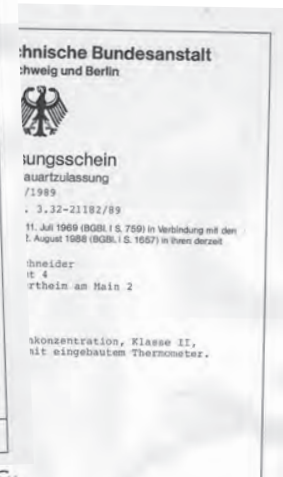
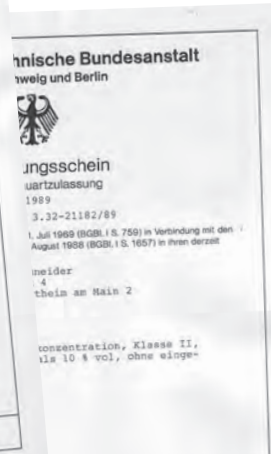
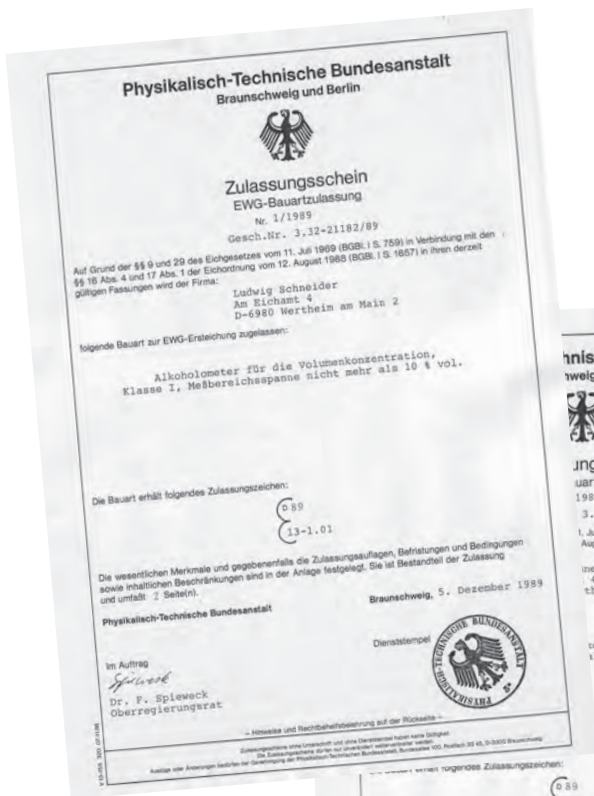
## Quality features of plastic hydrometers

- Measuring device suitable for foods (HACCP)
- Unbreakable (no glass breakage)

**Additional order no.:**

...../03 with works calibration certificate

# Technical details Certificates for alcoholmeters

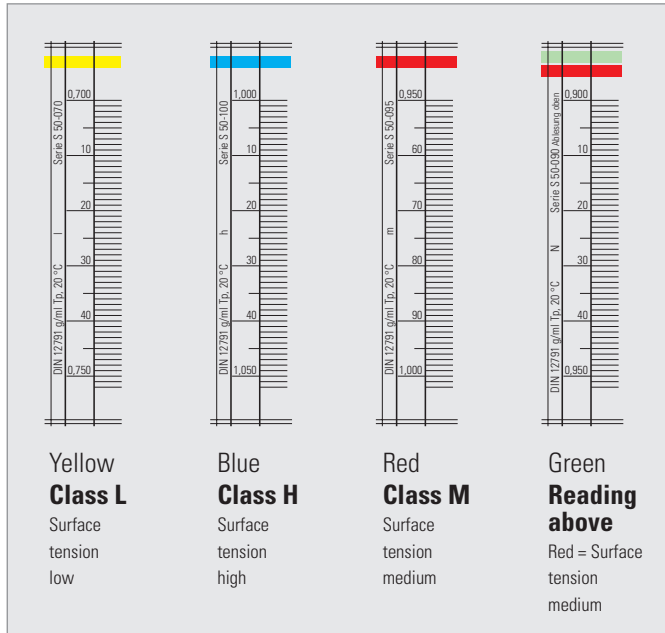


## Accreditation certificates for alcoholmeters class I, II and III

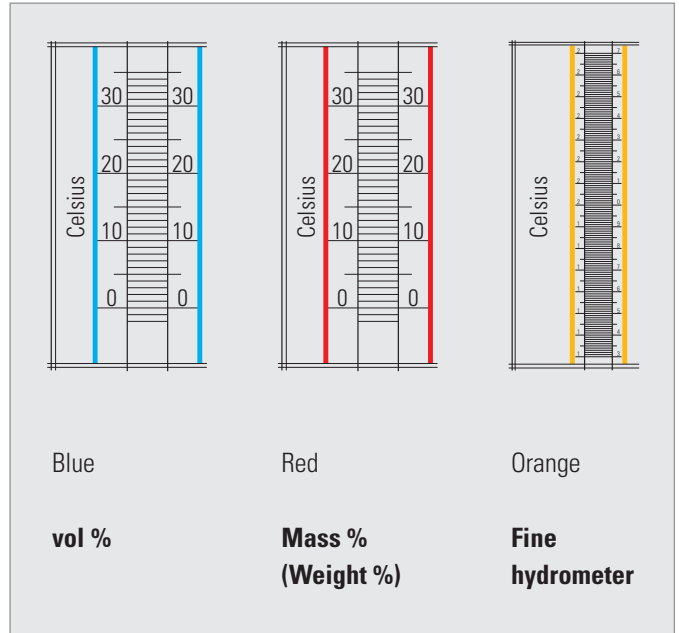
Ludwig Schneider GmbH & Co. KG has accredited the alcoholmeters of class I, II and III (see pages 35 and 36) by the Physikalisch Technische Bundesanstalt (PTB).

# Technical details

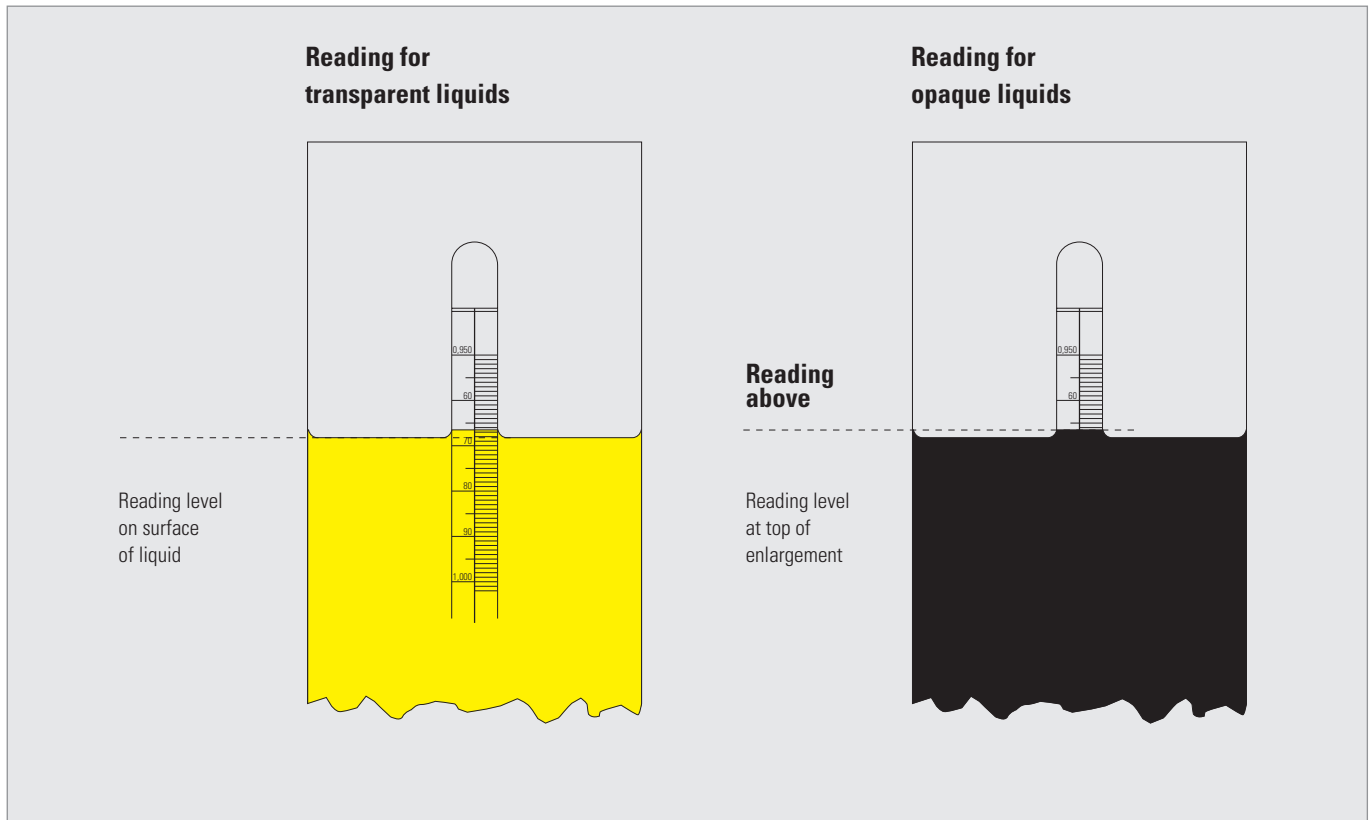
## Hydrometer colour codes for surfaces tension classes acc. to DIN 12790, DIN 12791 and ISO/R649



## Lateral colour codes of thermometer scales according to hydrometer marking



## Scale reading for liquids of different transparency



# Product summary

- Catalogue **Engine Thermometers**
- Catalogue **General Purpose and Special Thermometers, Contact Thermometers**
- Catalogue **Precision Laboratory Thermometers & Sets, Ground Joint Thermometers**
- Catalogue **Meteorological Thermometers and Digital Measuring Devices**
- Catalogue **Precision Thermometers for Material Testing**
- Catalogue **Precision Hydrometers**
- Catalogue **Digital Measuring Devices**
- Catalogue **Resistance Thermometers and Thermocouples**

**Ludwig Schneider** 

**Ludwig Schneider GmbH & Co. KG**

Postfach 1561 · 97865 Wertheim

Am Eichamt 4 · 97877 Wertheim

Tel.: +49 9342 8560-0 · Fax: +49 9342 84671

e-Mail: [info@ludwig-schneider.de](mailto:info@ludwig-schneider.de)

[www.ludwig-schneider.com](http://www.ludwig-schneider.com)