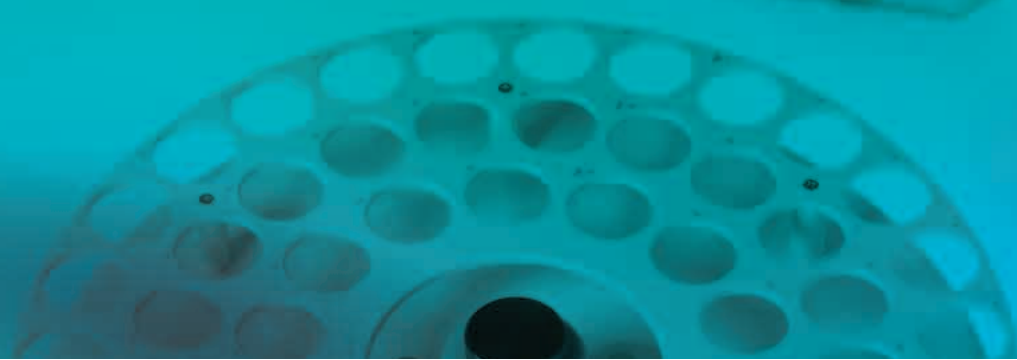




Accessories



Metrohm



Accessories 2006

s w i s s m a d e 



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Preface

Modern chemical analysis requires maximum analytical convenience. Part of such convenience is provided by the often small, intelligent and practical accessories without which the solutions to many complex analyses could not be realized.

Each Metrohm instrument is supplied with carefully selected accessories; indeed most instruments cannot be used fully and effectively without them. We place great importance in offering you solutions for problems from a single source. In addition to a comprehensive instrument program, this requires an equally extensive range of accessories.

Our range of more than 1000 accessories and spare parts is described in detail in the present Metrohm Accessories and Spare Parts catalog. The list of contents shows you our article groups. If the list of contents proves to be of little help, then please turn to the detailed keyword register on the catalog's last pages. It will cover your needs in the vast majority of cases. Should this not be the case, you will find us eager to help you.

The «exploded views» that you will find immediately after this foreword often prove very useful.

Even though this catalog contains a large number of accessories, it is not exhaustive. Should you fail to find an article either in this catalog or in our electrode or column catalogs, please turn to your Metrohm supplier or directly to Metrohm Ltd., Switzerland.

Symbols used:

- * The articles carrying one asterisk are only available for replacement purposes.
- ** The articles carrying two asterisks are only available as long as stocks last.

All other articles are either available ex stocks from our suppliers or from Metrohm Ltd., Switzerland.

Please note that the accessories may look different from the pictures shown here. The scope of delivery may also differ from the picture.

One thing is sure: Metrohm will always strive to satisfy your wishes. This means that we will also consider specially made products or accessories for your application, for which we will bill you on a time and material basis.

This catalog is unique to ion analysis. It is available from your Metrohm supplier on CD-ROM as well as on the Internet under:

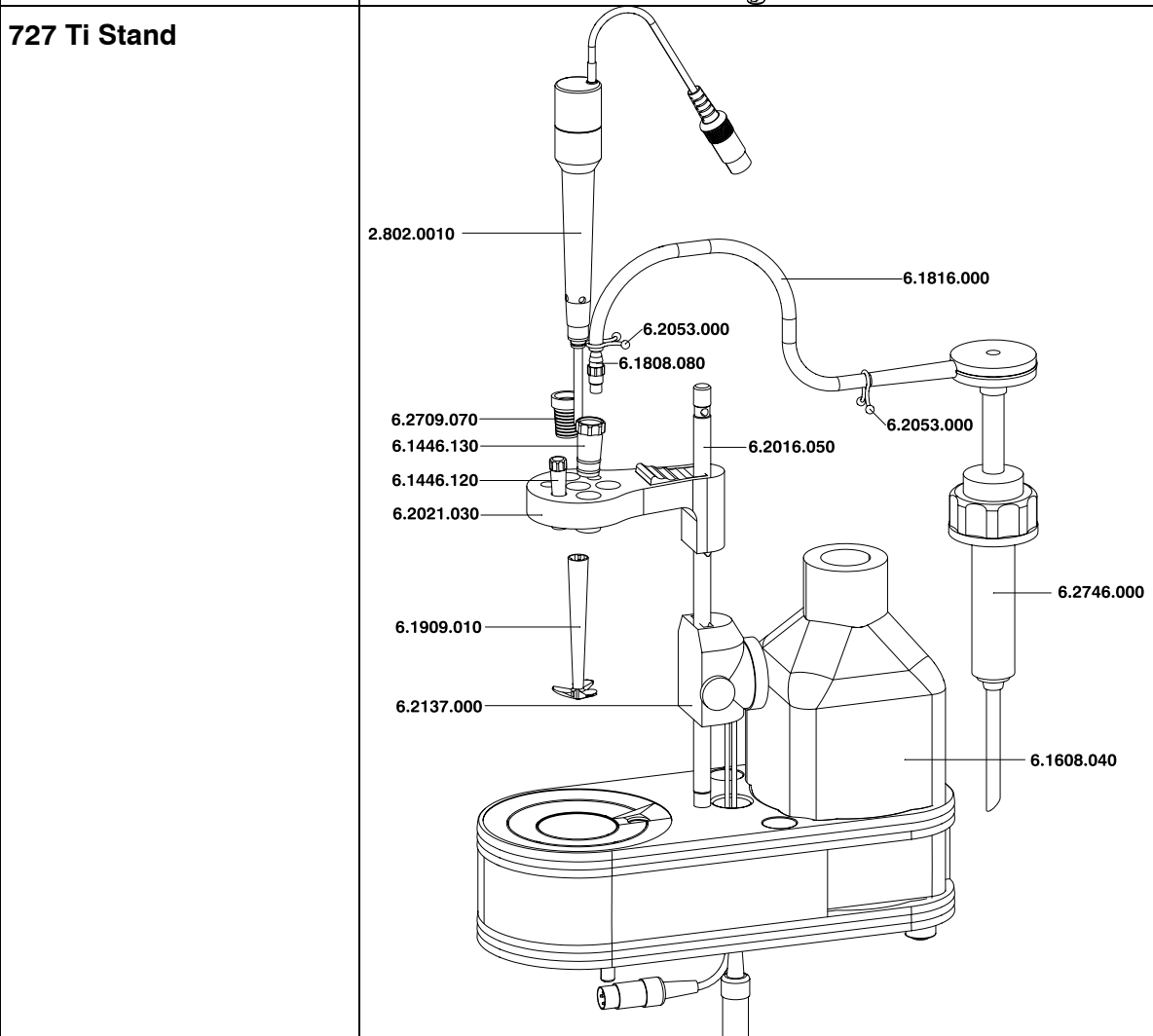
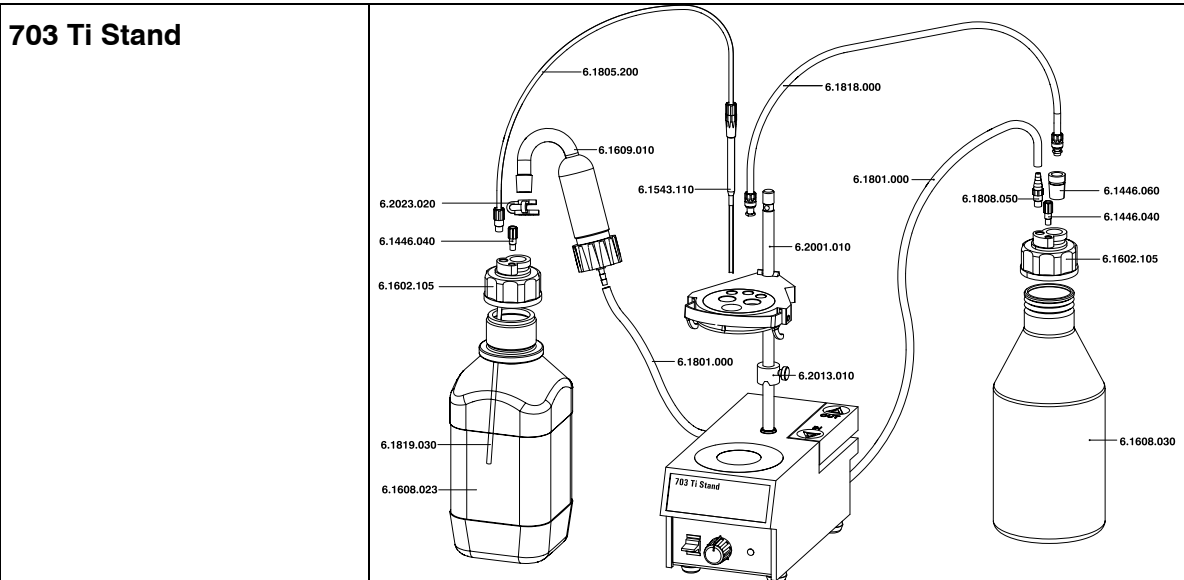
www.metrohm.com → Products → Accessories

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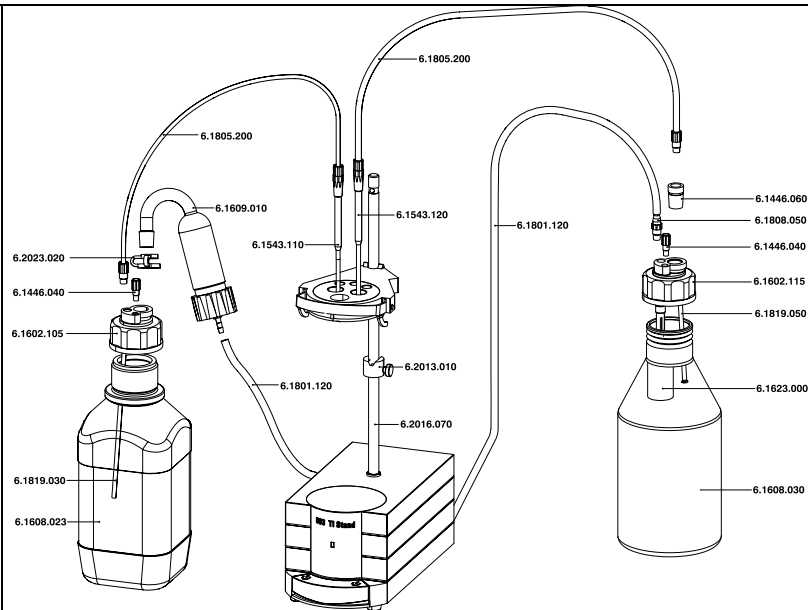
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Exploded views

Titration / dosing

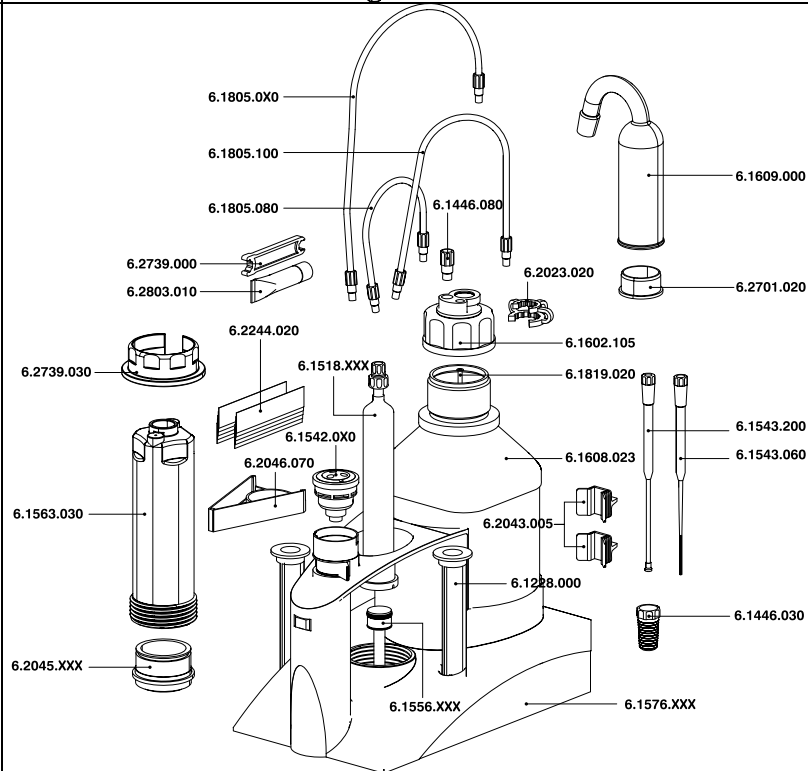


803 Ti Stand



Exchange Unit

- 6.3026.110**
- 6.3026.150**
- 6.3026.210**
- 6.3026.220**
- 6.3026.250**



Dosing Unit

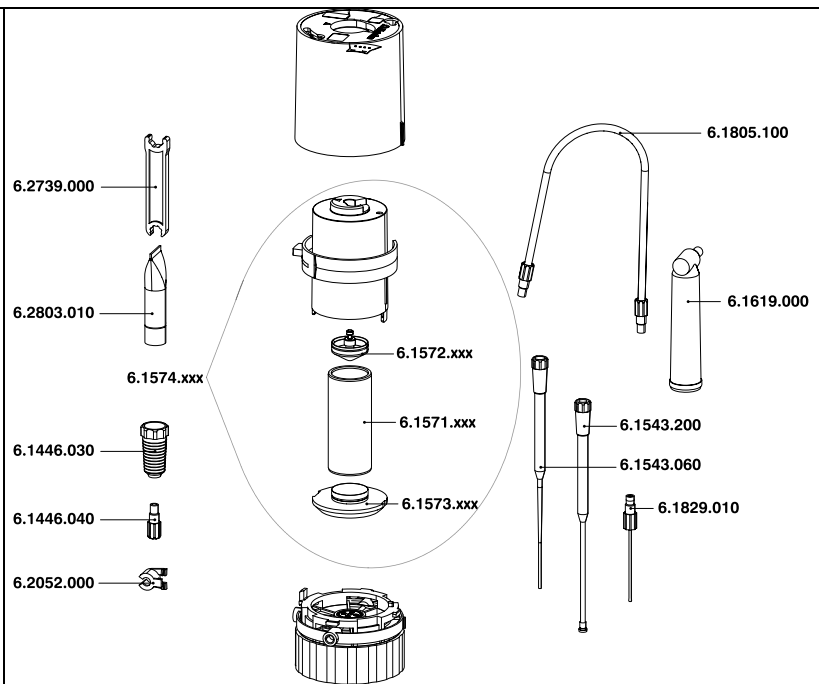
6.3032.120

6.3032.150

6.3032.210

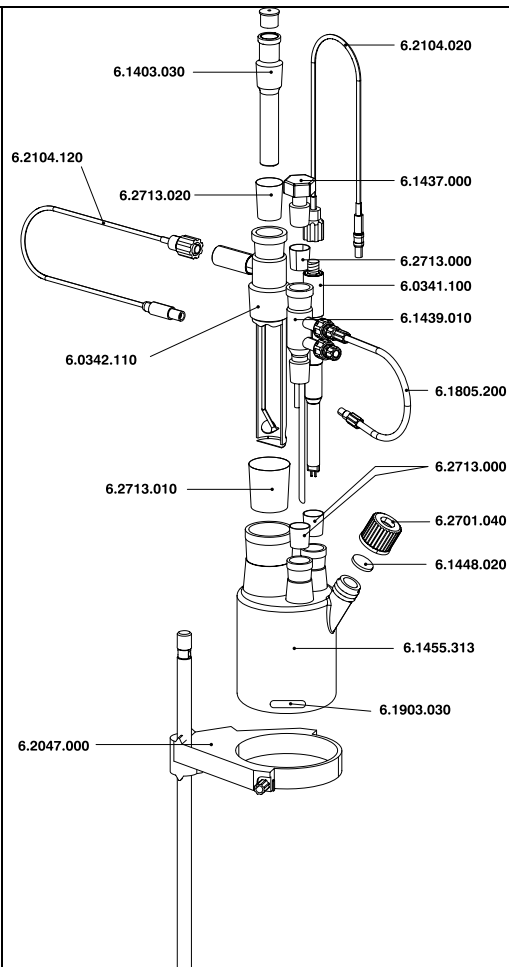
6.3032.220

6.3032.250

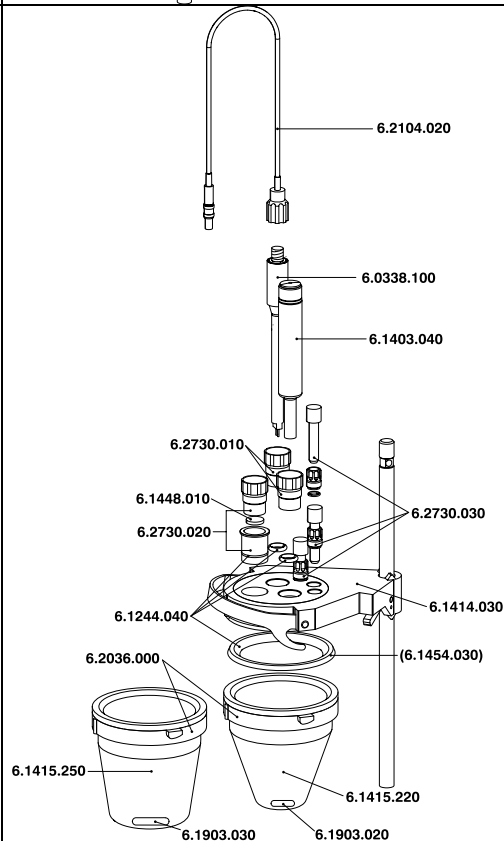


Karl Fischer

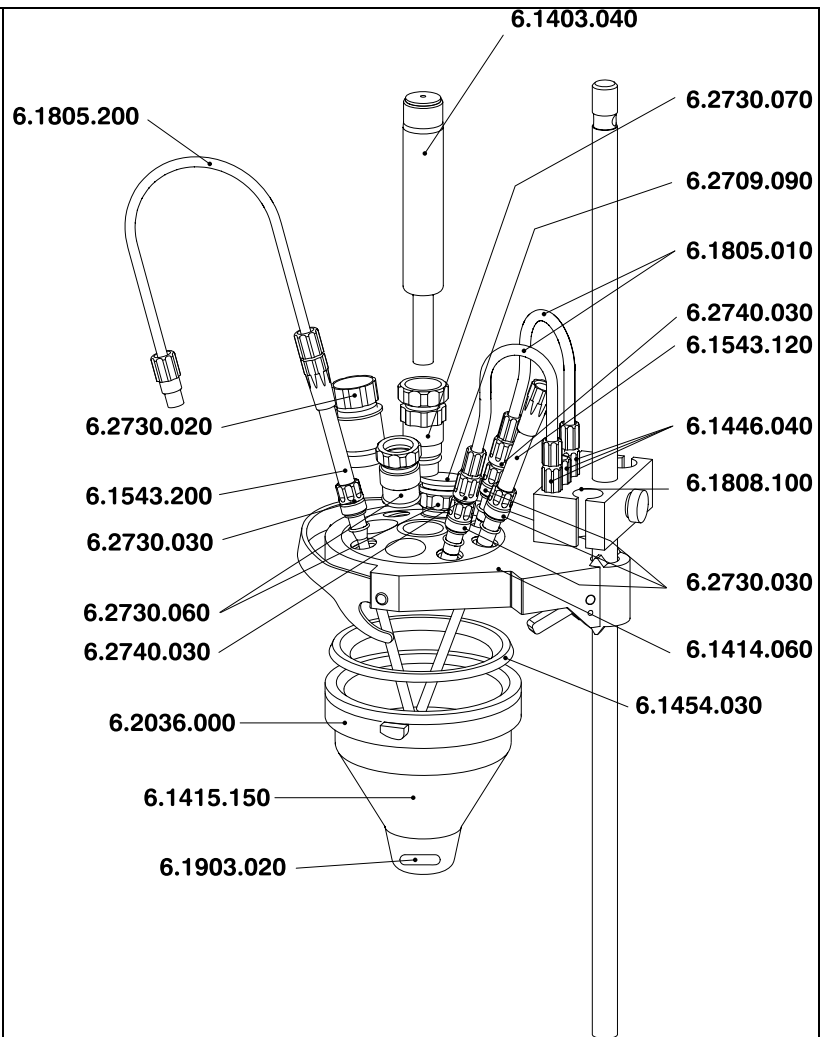
6.5405.000 Diaphragm-less cell for coulometric KF titrations



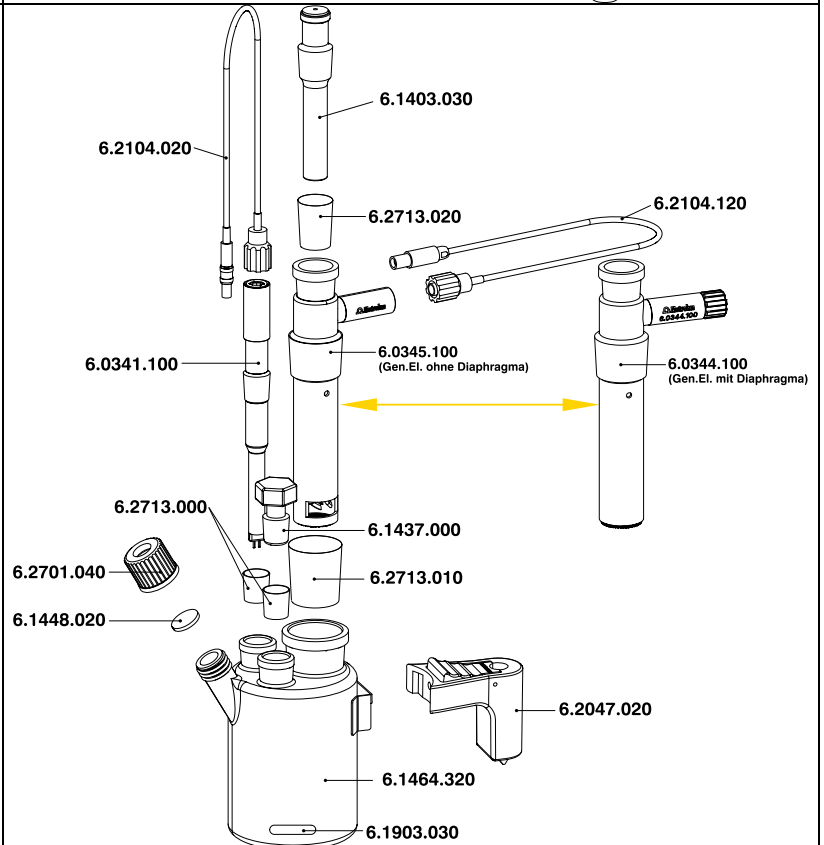
6.5609.000 KF titration equipment for volumetric KF titrations



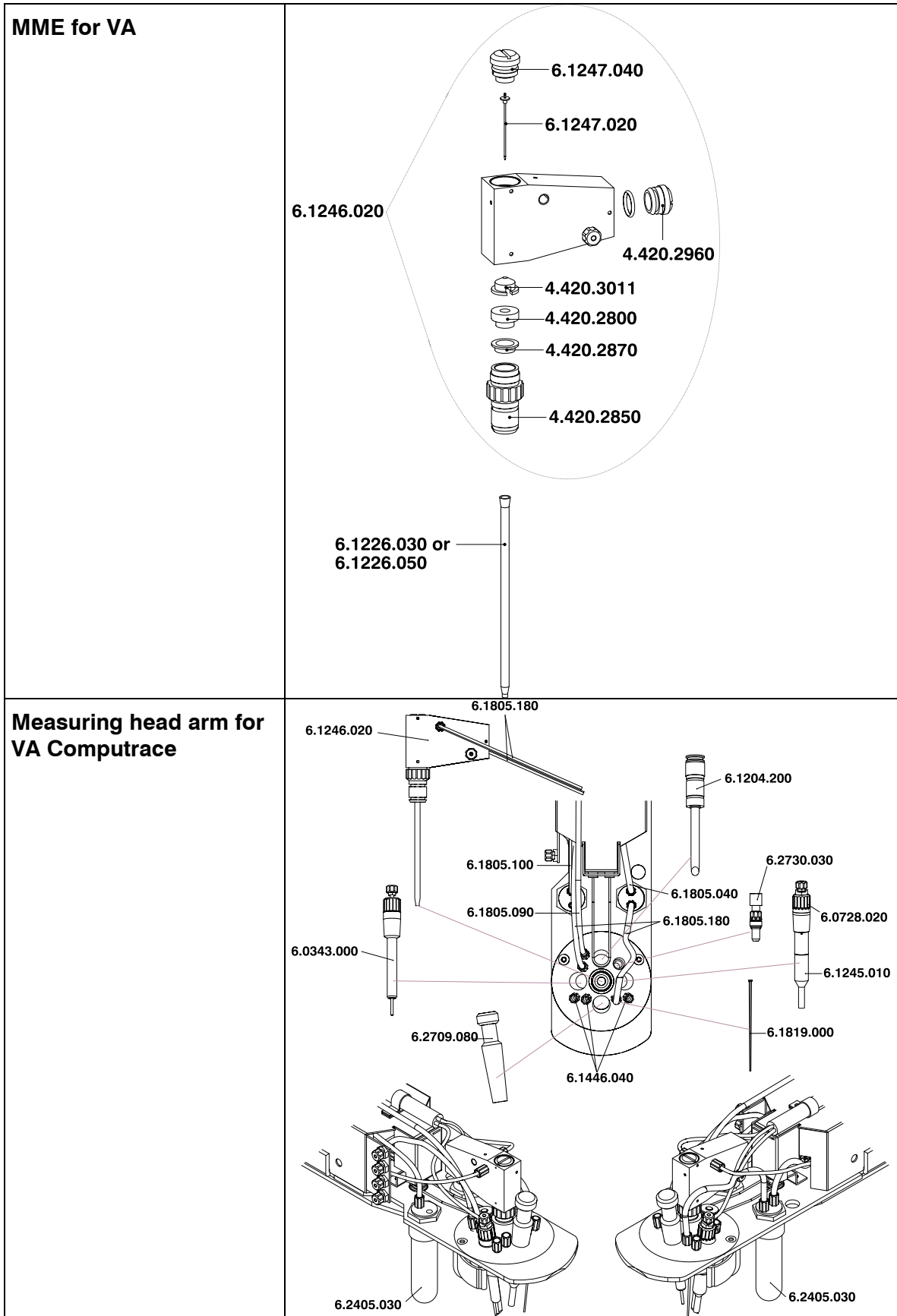
Titration cell for volumetric KF titrations



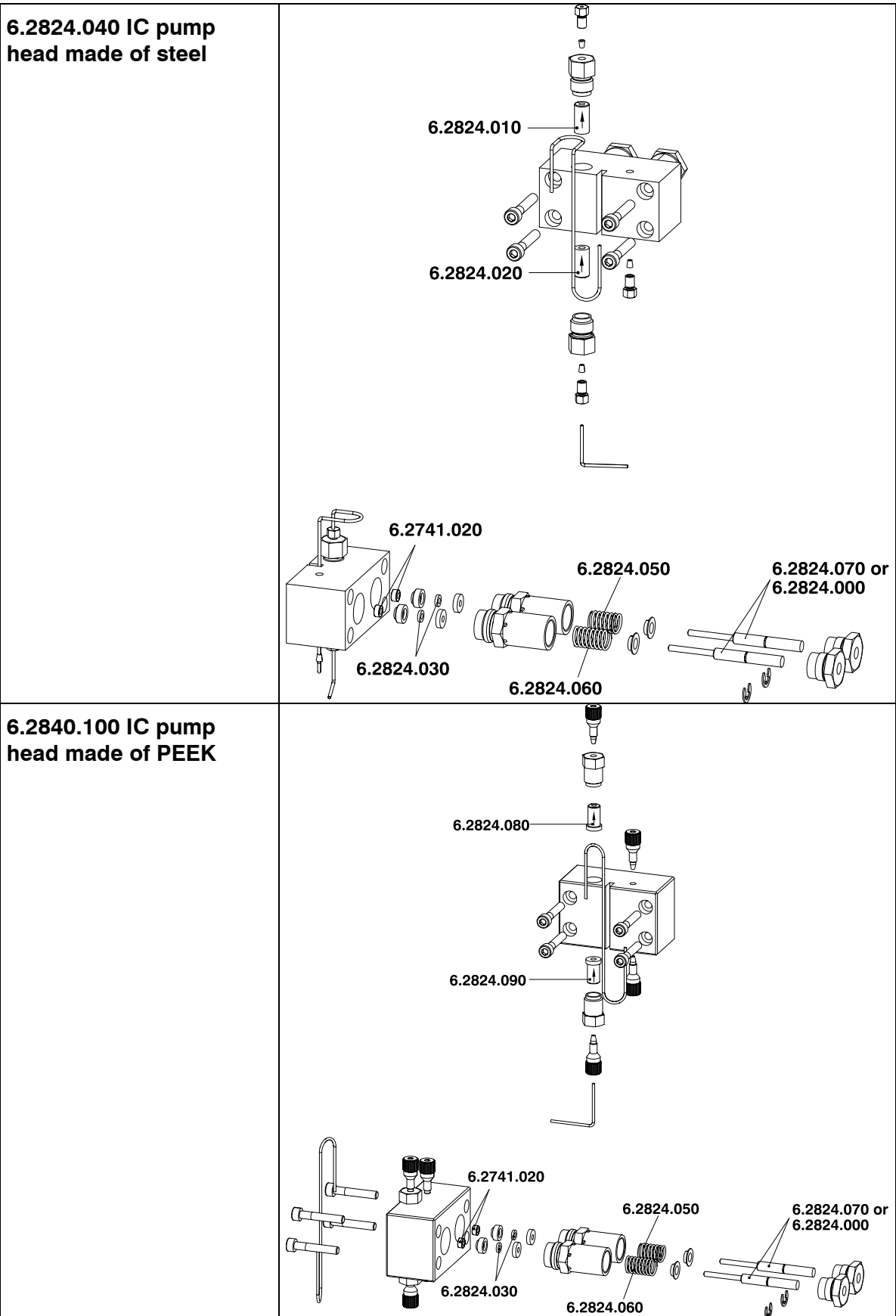
Titration cell for 756 and 831 KF Coulometers (generator cell with and without diaphragm)



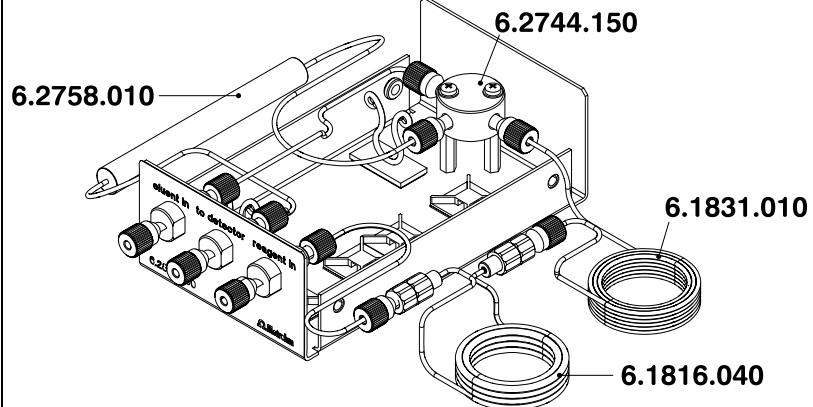
Voltammetry



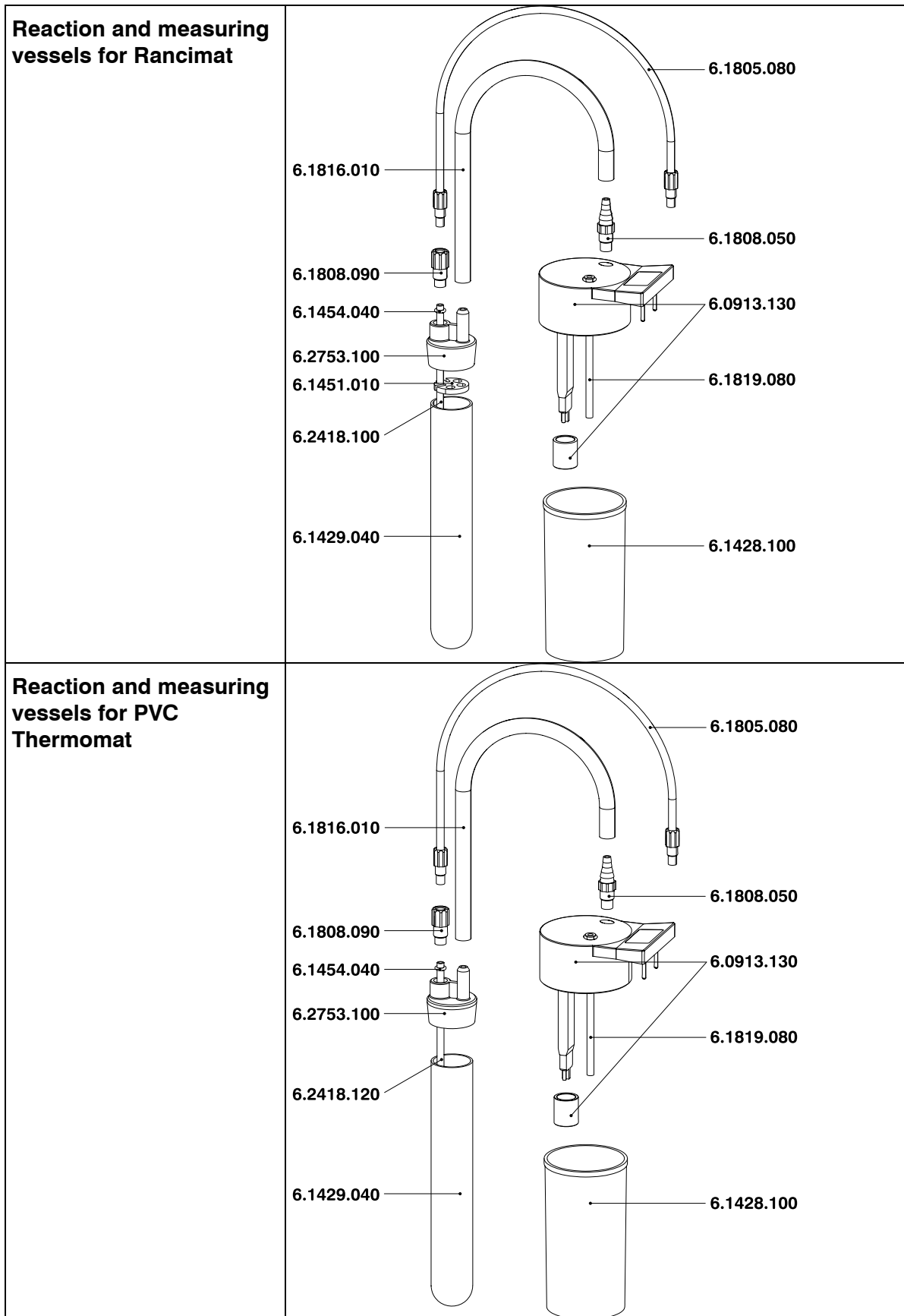
Ion chromatography



6.2836.000 IC post-column reactor



Stability measurement



6.12 Electrode parts

Order number	Name
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6.0343.000



Separate Pt Rod Electrode

Metal Electrode

Separate Pt-rod electrode (2.0 x 15 mm), plastic shaft, SGJ, for 694, 747 VA Stands and 757, 797 VA Computrace

Technical specifications

Shaft material	Plastic
Measuring range	-2000 ... 2000
Measuring unit	mV
Temperature range, long-term	0 ... 80 (°C)
Temperature range, short-term	0 ... 80 (°C)
Shaft diameter top (mm)	8
Shaft diameter bottom (mm)	8
Shaft length to head (mm)	86
Length from SGJ (mm)	67
Min. immersion depth (mm)	10
Electrode plug-in head	Clamping connection for VA
Indicator electrode type	Pt
Indicator electrode shape	Pin
SGJ sleeve	SGJ 14/15
Plug for filling opening	-
Pressure tolerance	> 0

6.0724.140



Ag/AgCl Reference Electrode

Ag/AgCl Internal system for modular reference electrode

Technical specifications

Shaft material	Glass
Temperature range, long-term	0 ... 80 (°C)
Temperature range, short-term	0 ... 80 (°C)
Shaft diameter top (mm)	12
Shaft diameter bottom (mm)	8
Shaft length to head (mm)	50
Length from SGJ (mm)	28
Min. immersion depth (mm)	20
Electrode plug-in head	Metrohm socket B
SGJ sleeve	SGJ 14/15
Plug for filling opening	No

Order number	Name																												
6.0728.000	<p data-bbox="517 264 927 297">Ag/AgCl Reference Electrode</p> <p data-bbox="517 309 683 338">Internal system</p> <p data-bbox="517 347 798 376">Technical specifications</p> <table data-bbox="517 376 1034 934"> <tr> <td data-bbox="517 376 826 405">Shaft material</td> <td data-bbox="855 376 935 405">PTCFE</td> </tr> <tr> <td data-bbox="517 412 935 472">Temperature range, long-term</td> <td data-bbox="855 412 935 472">0 ... 60 (°C)</td> </tr> <tr> <td data-bbox="517 477 935 537">Temperature range, short-term</td> <td data-bbox="855 477 935 537">0 ... 60 (°C)</td> </tr> <tr> <td data-bbox="517 542 826 571">Diaphragm</td> <td data-bbox="855 542 986 571">Ceramic pin</td> </tr> <tr> <td data-bbox="517 575 826 604">Shaft diameter top (mm)</td> <td data-bbox="855 575 884 604">12</td> </tr> <tr> <td data-bbox="517 609 826 638">Shaft diameter bottom (mm)</td> <td data-bbox="855 609 868 638">7</td> </tr> <tr> <td data-bbox="517 642 826 672">Shaft length to head (mm)</td> <td data-bbox="855 642 884 672">65</td> </tr> <tr> <td data-bbox="517 676 826 705">Length from SGJ (mm)</td> <td data-bbox="855 676 884 705">28</td> </tr> <tr> <td data-bbox="517 710 826 739">Min. immersion depth (mm)</td> <td data-bbox="855 710 884 739">10</td> </tr> <tr> <td data-bbox="517 743 826 772">Electrode plug-in head</td> <td data-bbox="855 743 1034 772">Clamping screw</td> </tr> <tr> <td data-bbox="517 777 826 837">Internal reference electrode type</td> <td data-bbox="855 777 1034 837">Ag wire + AgCl</td> </tr> <tr> <td data-bbox="517 842 826 871">Resistance (kOhm)</td> <td data-bbox="855 842 916 871">< 0.1</td> </tr> <tr> <td data-bbox="517 875 826 904">SGJ sleeve</td> <td data-bbox="855 875 970 904">SGJ 14/15</td> </tr> <tr> <td data-bbox="517 909 826 938">Plug for filling opening</td> <td data-bbox="855 909 868 938">-</td> </tr> </table>	Shaft material	PTCFE	Temperature range, long-term	0 ... 60 (°C)	Temperature range, short-term	0 ... 60 (°C)	Diaphragm	Ceramic pin	Shaft diameter top (mm)	12	Shaft diameter bottom (mm)	7	Shaft length to head (mm)	65	Length from SGJ (mm)	28	Min. immersion depth (mm)	10	Electrode plug-in head	Clamping screw	Internal reference electrode type	Ag wire + AgCl	Resistance (kOhm)	< 0.1	SGJ sleeve	SGJ 14/15	Plug for filling opening	-
Shaft material	PTCFE																												
Temperature range, long-term	0 ... 60 (°C)																												
Temperature range, short-term	0 ... 60 (°C)																												
Diaphragm	Ceramic pin																												
Shaft diameter top (mm)	12																												
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Shaft length to head (mm)	65																												
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Electrode plug-in head	Clamping screw																												
Internal reference electrode type	Ag wire + AgCl																												
Resistance (kOhm)	< 0.1																												
SGJ sleeve	SGJ 14/15																												
Plug for filling opening	-																												



6.0728.010	<p data-bbox="517 969 927 1003">Ag/AgCl Reference Electrode</p> <p data-bbox="517 1012 884 1041">Internal system without electrolyte</p> <p data-bbox="517 1050 798 1079">Technical specifications</p> <table data-bbox="517 1079 1034 1662"> <tr> <td data-bbox="517 1079 826 1108">Shaft material</td> <td data-bbox="855 1079 935 1108">PTCFE</td> </tr> <tr> <td data-bbox="517 1113 935 1173">Temperature range, long-term</td> <td data-bbox="855 1113 935 1173">0 ... 60 (°C)</td> </tr> <tr> <td data-bbox="517 1178 935 1238">Temperature range, short-term</td> <td data-bbox="855 1178 935 1238">0 ... 60 (°C)</td> </tr> <tr> <td data-bbox="517 1243 826 1272">Diaphragm</td> <td data-bbox="855 1243 986 1272">Ceramic pin</td> </tr> <tr> <td data-bbox="517 1276 826 1305">Shaft diameter top (mm)</td> <td data-bbox="855 1276 884 1305">15</td> </tr> <tr> <td data-bbox="517 1310 826 1339">Shaft diameter bottom (mm)</td> <td data-bbox="855 1310 884 1339">15</td> </tr> <tr> <td data-bbox="517 1344 826 1373">Shaft length to head (mm)</td> <td data-bbox="855 1344 884 1373">85</td> </tr> <tr> <td data-bbox="517 1377 826 1406">Length from SGJ (mm)</td> <td data-bbox="855 1377 884 1406">53</td> </tr> <tr> <td data-bbox="517 1411 826 1440">Min. immersion depth (mm)</td> <td data-bbox="855 1411 884 1440">10</td> </tr> <tr> <td data-bbox="517 1444 826 1473">Electrode plug-in head</td> <td data-bbox="855 1444 1034 1473">Clamping screw</td> </tr> <tr> <td data-bbox="517 1478 826 1538">Internal reference electrode type</td> <td data-bbox="855 1478 1034 1538">Ag wire + AgCl</td> </tr> <tr> <td data-bbox="517 1543 826 1572">Resistance (kOhm)</td> <td data-bbox="855 1543 916 1572">< 0.1</td> </tr> <tr> <td data-bbox="517 1576 826 1606">Reference electrolyte type</td> <td data-bbox="855 1576 948 1606">variable</td> </tr> <tr> <td data-bbox="517 1610 826 1639">SGJ sleeve</td> <td data-bbox="855 1610 884 1639">No</td> </tr> <tr> <td data-bbox="517 1644 826 1673">Plug for filling opening</td> <td data-bbox="855 1644 868 1673">-</td> </tr> </table>	Shaft material	PTCFE	Temperature range, long-term	0 ... 60 (°C)	Temperature range, short-term	0 ... 60 (°C)	Diaphragm	Ceramic pin	Shaft diameter top (mm)	15	Shaft diameter bottom (mm)	15	Shaft length to head (mm)	85	Length from SGJ (mm)	53	Min. immersion depth (mm)	10	Electrode plug-in head	Clamping screw	Internal reference electrode type	Ag wire + AgCl	Resistance (kOhm)	< 0.1	Reference electrolyte type	variable	SGJ sleeve	No	Plug for filling opening	-
Shaft material	PTCFE																														
Temperature range, long-term	0 ... 60 (°C)																														
Temperature range, short-term	0 ... 60 (°C)																														
Diaphragm	Ceramic pin																														
Shaft diameter top (mm)	15																														
Shaft diameter bottom (mm)	15																														
Shaft length to head (mm)	85																														
Length from SGJ (mm)	53																														
Min. immersion depth (mm)	10																														
Electrode plug-in head	Clamping screw																														
Internal reference electrode type	Ag wire + AgCl																														
Resistance (kOhm)	< 0.1																														
Reference electrolyte type	variable																														
SGJ sleeve	No																														
Plug for filling opening	-																														



Order number	Name
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6.0728.020



Ag/AgCl Reference Electrode

Internal system with electrolyte KCl = 3 mol/L

Technical specifications

Shaft material	PTCFE
Temperature range, long-term (°C)	0 ... 60
Temperature range, short-term (°C)	0 ... 60
Diaphragm	Ceramic pin
Shaft diameter top (mm)	15
Shaft diameter bottom (mm)	15
Shaft length to head (mm)	85
Length from SGJ (mm)	53
Electrode plug-in head	Clamping screw
Internal reference electrode type	Ag/AgCl cartridge
Resistance (kOhm)	< 0.1
Reference electrolyte type	c(KCl) = 3 mol/L
SGJ sleeve	No
Plug for filling opening	-

6.1204.110



Glassy Carbon Electrode Tip

Carbon electrode tip made of glassy carbon (GC). Electrode disk diameter 2 mm, M3 thread connection

Technical specifications

Material	Glassy carbon
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

Order number	Name
--------------	------

6.1204.120

**Platinum electrode tip 2 mm**

Metal electrode tip, platinum (Pt). Electrode disk diameter 2 mm, unpolished. M3 thread.

Technical specifications

Material	Platinum
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

6.1204.130

**Silver Electrode Tip**

Metal electrode tip, silver (Ag). Electrode disk diameter 2 mm. M3 thread.

Technical specifications

Material	Silver
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

6.1204.140

**Gold Electrode Tip**

Metal electrode tip, gold (Au). Electrode disk diameter 2 mm. M3 thread.

Technical specifications

Material	Gold
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

Order number	Name
--------------	------

6.1204.150

Lateral Gold Electrode Tip

Metal electrode tip, gold (Au), with lateral electrode surface. Electrode disk diameter 3 mm. M3 thread.

Technical specifications

Material	Gold
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	54.5

6.1204.160

Platinum Electrode Tip for CVS 2 mm

Metal electrode tip, platinum (Pt). Electrode disk diameter 2 mm, polished surface. M3 thread.

Technical specifications

Material	Platinum
Material remark	Pt electrode tip 2 mm
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

6.1204.170

Platinum Electrode Tip for CVS 3 mm

Metal electrode tip, platinum (Pt). Electrode disk diameter 3 mm, polished surface. M3 thread,

Technical specifications

Material	Platinum
Material remark	Pt electrode tip 3 mm
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

Order number	Name
--------------	------

6.1204.180

**Ultra-Trace electrode tip**

Carbon electrode tip from glassy Ultra Trace graphite. Electrode disk diameter 2 mm

Technical specifications

Material	graphite
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	7
Length in mm	52.5

6.1204.200

**Stirrer for VA Stand**

Stirrer for VA Stand, complete, metal-free

Technical specifications

Outer diameter in mm	7
Length in mm	102

6.1204.300

**Glassy Carbon Electrode Tip**

Glassy carbon (GC) electrode tip, electrode disk diameter 3 mm, M4 thread

Technical specifications

Material	Glassy carbon
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	10
Length in mm	52.5

Scope of delivery

6.2802.000	Polishing set for solid-state electrodes
------------	--

Order number	Name
--------------	------

6.1204.310

Platinum Electrode Tip

Platinum (Pt) electrode tip, electrode disk diameter 3 mm, M4 thread

Technical specifications

Material	Platinum
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	10
Length in mm	52.5

Scope of delivery

6.2802.000	Polishing set for solid-state electrodes
------------	--

6.1204.320

Gold Electrode Tip

Gold (Au) electrode tip, electrode disk diameter 3 mm, M4 thread

Technical specifications

Material	Gold
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	10
Length in mm	52.5

Scope of delivery

6.2802.000	Polishing set for solid-state electrodes
------------	--

6.1204.330

Silver Electrode Tip

Silver (Ag) electrode tip, electrode disk diameter 3 mm, M4 thread

Technical specifications

Material	Silver
Material remark	electrode disk
Material 2	PEEK
Material remark 2	electrode shaft
Outer diameter in mm	10
Length in mm	52.5

Scope of delivery

6.2802.000	Polishing set for solid-state electrodes
------------	--

Order number	Name
--------------	------

6.1205.010

Polymer membrane electrode tip, Ca

Polymer membrane electrode tip, Ca

Technical specifications

Material	Epoxy resin
Material remark	Sleeve
Material 2	PVC
Material remark 2	Membrane
Outer diameter in mm	12
Length in mm	24



6.1205.020

Polymer membrane electrode tip, K

Polymer membrane electrode tip, K

Technical specifications

Material	Epoxy resin
Material remark	Sleeve
Material 2	PVC
Material remark 2	Membrane
Outer diameter in mm	12
Length in mm	24



6.1205.030

Polymer membrane electrode tip, NO3

Polymer membrane electrode tip, NO3

Technical specifications

Material	Epoxy resin
Material remark	Sleeve
Material 2	PVC
Material remark 2	Membrane
Outer diameter in mm	12
Length in mm	24



Order number	Name
--------------	------

6.1205.040

Polymer membrane electrode tip, BF4

Polymer membrane electrode tip, BF4

Technical specifications

Material	Epoxy resin
Material remark	Sleeve
Material 2	PVC
Material remark 2	Membrane
Outer diameter in mm	12
Length in mm	24

6.1225.010

Electrolyte vessel

With glass frit (P4, ISO 4793=P16). With electrolyte storage vessel and stopcock.

For modular reference electrode 6.0724.140

Technical specifications

Material	Glass
Outer diameter in mm	6
Length in mm	86
Length remark	to SGJ

6.1226.030

Mercury drop capillary (non-silanized) for MME

Non-silanized mercury drop capillary (10 pieces) with 2 silicone sealing rings

Technical specifications

Material	Glass
Outer diameter in mm	4.5
Inner diameter in mm	0.05
Length in mm	116

Order number	Name
--------------	------

6.1226.050

**Mercury drop capillary (silanized) for MME**

Silanized mercury drop capillary (10 pieces) including 2 silicone sealing rings

Technical specifications

Material	Clear glass
Outer diameter in mm	4.5
Inner diameter in mm	0.05
Length in mm	116

6.1228.000

**Storage and measuring tube**

For electrodes with SGJ 14/15 or SGJ sleeve

Technical specifications

Material	PE
----------	----

6.1230.000

**Mercury dropping capillary**

Mercury dropping capillary for dropping mercury electrode (DME). Dropping time 2.5...5 s.

Conditions for dropping time: $h(\text{Hg}) = 45 \text{ cm}$, $c(\text{KCl}) = 0.1 \text{ mol/L}$, $\Delta U(\text{pol}) = -1.0 \text{ V vs. Ag/AgCl//KCl } 3 \text{ mol/L}$.

Technical specifications

Material	Glass
Outer diameter in mm	4.5
Inner diameter in mm	0.07
Length in mm	200