



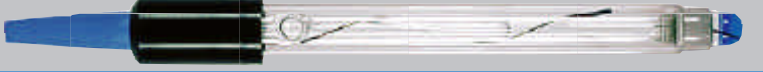
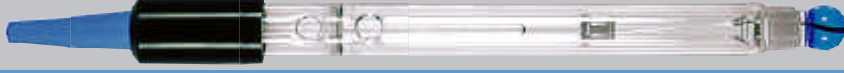

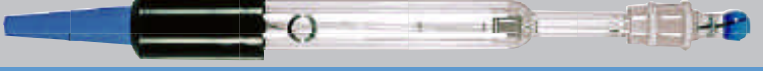







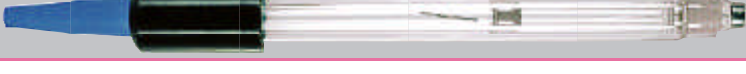
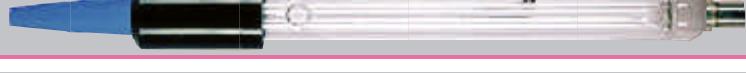
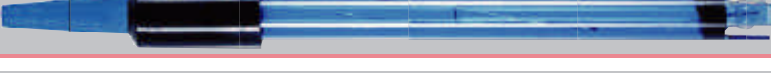


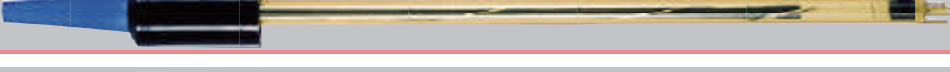



LABORATORY
pH and ORP Electrodes



PHOENIX
ELECTRODE COMPANY

2001 CATALOGUE

1.	5773504 5773905		General Purpose pH
2.	5774504 5773521		High pH
3.	5773521		Rugged Bulb pH
4.	5773702		Double Junction pH
5.	5773792 5774792		Sealed Double Junction pH
6.	5773510 5773710		Sleeve Junction pH
7.	5673506 5673507 5673510		Test Tube pH
8.	5573501 5573902		Semi Micro pH
9.	5473901 5473902		Micro pH
10.	5573512		Spear Tip pH
11.	5773301		Glass Mono pH
12.	5771423		Ag/AgCl Reference
13.	5771424		Calomel Reference
14.	5779685 5779601		ORP
15.	5770601		Silver Billet
16.	5733526 5733526R 5733726		Economy, Plastic Body pH
17.	5733928 5733928R		Calomel, Plastic Body pH
18.	5732511		Flat Surface pH
19.	5533501 5533901		Micro, Plastic pH
20.	5739602		Economy, Plastic Body ORP

GLASS BODY ELECTRODES**COMBINATION pH**

Part #	Glass Type	pH Range	Temperature Range	"D" Diameter	"L" Length	Internal Reference Element	Photo #
5773504	GX-2	0-13	0° to 100°C	12mm	110mm	Ag/AgCl Refillable	1.
5773905	GX-2	0-13	-5° to 80°C	12mm	110mm	Calomel Refillable	1.
5774504	GX-3	0-14	5° to 100°C	12mm	110mm	Ag/AgCl Refillable	2.
5773521	GX-2	0-13	0° to 100°C	12mm	110mm	Ag/AgCl Refillable	3.
5773702	GX-2	0-13	0° to 100°C	12mm	110mm	Double Junction Refillable	4.
5773792	GX-2	0-13	0° to 110°C	12mm	110mm	Sealed Double Junction	5.
5774792	GX-3	0-14	5° to 110°C	12mm	110mm	Sealed Double Junction	5.
5773510	GX-2	0-13	0° to 100°C	12mm	110mm	Ag/AgCl Refillable	6.
5773710	GX-2	0-13	0° to 100°C	12mm	110mm	Double Junction Refillable	6.
5673506	GX-2	0-13	0° to 100°C	8mm	55mm	Ag/AgCl Refillable	7.
5673507	GX-2	0-13	0° to 100°C	8mm	115mm	Ag/AgCl Refillable	7.
5673510	GX-2	0-13	0° to 100°C	8mm	250mm	Ag/AgCl Refillable	7.
5573501	GX-2	0-13	0° to 100°C	6mm	110mm	Ag/AgCl Refillable	8.
5573902	GX-2	0-13	-5° to 80°C	6mm	110mm	Calomel Refillable	8.
5473901	GX-2	0-13	-5° to 80°C	4mm	130mm	Calomel Refillable	9.
5473902	GX-2	0-13	-5° to 80°C	4mm	180mm	Calomel Refillable	9.
5573512	GX-2	0-13	-5° to 100°C	6mm	25mm	Ag/AgCl Refillable	10.

GLASS pH

5773301	GX-2	0-13	0° to 100°C	12mm	110mm	-	11.
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REFERENCE

5771423	-	-	0° to 100°C	12mm	110mm	Ag/AgCl Refillable	12.
5771424	-	-	-5° to 80°C	12mm	110mm	Calomel Refillable	13.

METALLIC

5779685	-	-	-5° to 100°C	12mm	110mm	Ag/AgCl Sealed	14.
5779601	-	-	-5° to 100°C	12mm	110mm	Ag/AgCl Refillable	14.
5770601	-	-	-5° to 100°C	12mm	110mm	Ag/AgCl KNO3 Refillable	15.

EPOXY BODY ELECTRODES**COMBINATION pH**

Part #	Glass Type	pH Range	Temperature Range	"D" Diameter	"L" Length	Internal Reference Element	Photo #
5733526	GX-2	0-13	0° to 80°C	12mm	115mm	Ag/AgCl Sealed	16.
5733526R	GX-2	0-13	0° to 80°C	12mm	115mm	Ag/AgCl Refillable	16.
5733726	GX-2	0-13	0° to 80°C	12mm	115mm	Double Junction Sealed	16.
5733928	GX-2	0-13	-5° to 80°C	12mm	115mm	Calomel Sealed	17.
5733928R	GX-2	0-13	-5° to 80°C	12mm	115mm	Calomel Refillable	17.
5732511	GX-1	0-13	0° to 80°C	12mm	115mm	Ag/AgCl Sealed	18.
5533501	GX-2	0-13	0° to 80°C	6mm	155mm	Ag/AgCl Sealed	19.
5533901	GX-2	0-13	-5° to 80°C	6mm	155mm	Calomel Sealed	19.

METALLIC

5739602	-	-	0° to 80°C	12mm	110mm	Ag/AgCl Sealed	20.
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All electrodes are available with 0-14 pH GX-3 glass, (Indicate in the fourth digit of the part number with a 4).

All double junction electrodes come standard with 4M KCl in the outer reservoir. (Other outer electrolytes are special order).

ELECTRODE APPLICATIONS

Application		Alkaline Solutions	Water	Blood	Dough	Education Purposes	Emulsions	Fat/Cream/Cosmetics	Field Use	Gypsum	Hops/Beer	Hydrofluoric Acid	Lab Flasks, Tall-form	Lacquer	Liquor, etc.	Low Ionic Strength	Macro Samples	Meat, Fish, Cheese	Micro Samples	Milk	Non-aqueous Media	Oil	Paint	Photo Baths	Sea Water, Swimming Pools	Soil	Solids, High Content Of	Surfaces (Leather, Paper, Agar)	Suspensions	Temperature, High or Varying	Test Tubes	Treacle, Honey, etc.	TRIS Buffer	Viscosity, High	Yogurt, Curdled Milk				
1.	5773504		●			●											●																						
1.	5773905		●	●													●			●				●											●				
2.	5774504	●																																					
3.	5773521					●			●	●															●	●		●											
4.	5773702							●					●	●						●	●		●									●				●	●		
5.	5773792		●						●		●									●												●					●	●	
5.	5774792	●																														●					●	●	
6.	5773510						●				●																	●							●		●	●	
6.	5773710			●			●	●		●				●	●	●					●	●	●				●		●					●		●	●		
7.	5673506																																						
7.	5673507												●																										
7.	5673510				●								●																										
8.	5573501												●						●																				
8.	5573902												●						●																				
9.	5473901			●									●						●																				
9.	5473902			●									●						●																				
10.	5573512				●																																		
11.	5773301		●			●											●								●											●			
12.	5771423		●			●											●																						
13.	5771424		●			●											●																						
14.	5779685		●														●								●											●			
14.	5779601		●														●								●										●		●		
15.	5770601																●																						
16.	5733526		●			●		●																	●														
16.	5733526R		●			●											●																						
16.	5733726		●			●		●																	●														
17.	5733928		●			●		●																														●	
17.	5733928R		●			●											●																				●		
18.	5732511			●		●																						●											
19.	5533501					●							●																										
19.	5533901					●							●																										
20.	5739602					●		●																	●														
21.	5773503		●				●	●									●								●												●	●	
21.	5773703					●	●			●			●	●	●					●				●													●	●	
22.	5733503		●					●		●							●								●													●	●
22.	5733703		●					●	●				●	●	●					●				●		●											●	●	
23.	5733505			●																																			
23.	5733705			●																				●	●													●	

● Recommended electrode for the application.

Ordering Information

pHoenix Electrodes can be ordered in three different electrode head versions:

- A. Fixed Cable Electrode (standard) 5773504-003B
- B. DL Exclusive Screw Head (optional) 5773504-DL
- C. S7 European Screw Head (optional) 5773504-S7

All electrodes can be ordered refillable, indicate "R" after part number.

All electrodes can be ordered with a double junction, encode "7" fifth digit.
 All electrodes can be ordered with 0-14 GX-3 pH glass, encode "4" fourth digit.
 Standard cable length 3 feet; longer cable length available.
 Select proper electrode connector.

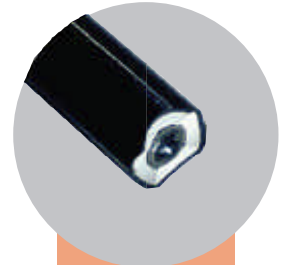
pHoenix Electrode

TUFF TIP® COMBINATION pH ELECTRODE

The new pHoenix Tuff Tip® electrode encompasses the latest design in sensor technology. The Tuff Tip® probe is constructed with the novel Magna-Sens™ reference junction and a rugged pH bulb protected by the unique Tuff Tip® shape.

The large annular ceramic Magna-Sens™ reference junction and cross linked polymer gel is resistant to fouling even in harsh and dirty samples. The Tuff Tip® is a robust alternative to the conventional laboratory electrodes where membrane breakage is a problem. It is also easy to clean with less carry over between samples.

- Rugged pH Tip
- Easy to Clean
- Fast Response
- Non-Clogging Reference Junction
- Sealed Cross Linked Polymer Reference
- Fast Response



Tip Detail

21.

5733534
5733734
5739834



Tuff Tip® pH
Tuff Tip® ORP

Part #	Glass Type	pH Range	Temperature Range	"D" Diameter	"L" Length	Internal Reference Element	Photo #
5733534	GX - 2	0 - 13	-5° to 100°C	12mm	110mm	Sealed Single Junction Reference	21.
5733734	GX - 2	0 - 13	-5° to 100°C	12mm	110mm	Sealed Double Junction Reference	21.
5739834	Platinum Disk	N/A	-5° to 100°C	12mm	110mm	Sealed Double Junction Reference	21.

pH CALIBRATION BUFFERS

Buffer Solution Bottles (±0.01 pH @ 25°C)	Buffer Pouches (±0.01 pH @ 25°C)
WD-00654-01 pH 1.68, 1 Pint (460 ml) Bottle	WD-35653-01 pH 4.01, 20 ml Pouch, 20/Box
WD-00654-00 pH 4.01, 1 Pint (460 ml) Bottle	WD-35653-02 pH 7.00, 20 ml Pouch, 20/Box
WD-00654-04 pH 7.00, 1 Pint (460 ml) Bottle	WD-35653-03 pH 10.00, 20 ml Pouch, 20/Box
WD-00654-08 pH 10.00, 1 Pint (460 ml) Bottle	WD-35653-04 Assortment 20 ml Pouch, 5 ea. of pH4, 7, 10
WD-00654-12 pH 12.45, 1 Pint (460 ml) Bottle	Calibration Solutions and Rinse Water (20 Total)

Rinse Water Pouch	pH Buffer Capsules (±0.02 pH @ 25°C)
WD-35653-00 De-Ionized Rinse Water 20 ml Pouch 20/Box	WD-05977-24 2 ea. pH 4, 7, 10 (6 Total)

pH Buffer Tablets (±0.05 pH @ 25°C)
WD-35801-84 pH 4.01, 50/Bag
WD-35801-87 pH 7.00, 50/Bag

pH STORAGE & REFERENCE FILL SOLUTIONS

R001000 pH Electrode Storage Solution, 475 ml	R001036 Equitransferent Filling Solution, 125 ml
R001009 LiCl 1M In Methanol, 125 ml	R001040 LiCl 1M In Glacial Acetic Acid, 125 ml
R001011 KCl/AgCl Saturated, 125 ml	R001051 KCl 1M In Water/Glycerol, 125 ml
R001012 KCl/AgCl Saturated Gel, 125 ml	R001052 KCl 1M In Dilute Acid, 125 ml
R001013 KCl Saturated, 125 ml	R001053 KCl In Dilute Base, 125 ml
R001014 KCl Saturated Gel, 125 ml	R001ATG 3M KCl/AgCL TG
R001015 KNO3 1M, 125 ml	R001072 3M KCl/Frisco
R001016 KNO3 1M Gel, 125 ml	R001070 3M KCl
R001018 LiCl 1M In Ethylene Glycol, 125 ml	R001STG Super Sat./KCl TG

DETACHABLE HEAD ELECTRODES



DL Detachable Cable

DL (pHoenix) Detachable Head Electrode



S7 Detachable Cable

S7 (European) Detachable Head Electrode

All electrodes except the pHree-Flow series are available with a detachable electrode head. The two types of detachable electrode heads offered are as follows:

1. DL Style (pHoenix exclusive detachable electrode head)
2. S7 Style (European standard detachable electrode head, e.g. Ingold, Schott & Conducta)

To order your choice of detachable electrode head, index in the suffix of the electrode part number, 5773504-DL for pHoenix style, or 5773504-S7 for European style. Appropriate detachable connector cable must be ordered separately. Please refer to the following chart for ordering the correct cable and connector.

DETACHABLE CABLES

9001071	DL pHoenix Style
9001041	S7 European Style (Fits all Ingold, Schott & Conducta etc.)

CABLE LENGTH

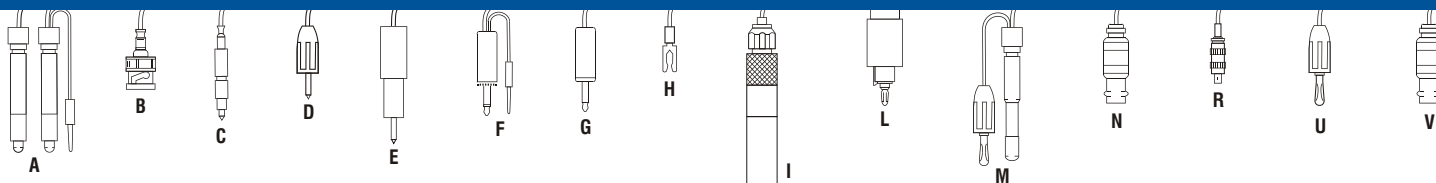
003	3ft. Low Noise
010	10ft. Low Noise
xxx	Specify Length Low Noise

CONNECTOR STYLE

B	BNC
A	US Standard
I	DIN (19262)
C	Radiometer
X	Specify, See Connector List

9001041 — 003 B (EXAMPLE Part #) S7 Style Detachable Cable With 3' Head & BNC

CONNECTOR TYPE & DESCRIPTION



- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>A U.S. Standard - Beckman, Corning, Orion, Fisher & other United States manufacturers</p> <p>B BNC - Chemtrix; Cole-Parmer, Consort, Hach; Corning 120, 140, 145, 150, 155; 3D; 200 & Recent 300 Series; Beckman pH meters; Orion 200, 520, 720, 920 & 940 & current series; Jenco; Hanna; & all other meters requiring BNC plugs.</p> <p>C Radiometer - Radiometer made during or after 1974/75 & Crison</p> <p>D Pin - Sargent-Welch models EP & RB, Fisher 150, & most reference electrodes for United States meters</p> <p>E Photovolt - Photovolt</p> <p>F Miniature Phone Plug A - Corning Models 5 & 6</p> <p>G Miniature Phone Plug B - Corning Model 3</p> <p>H Spade Lug - Industrial electrodes</p> | <p>I Din - German meters (DIN 19262 socket), Metrohm Type E, Mettler, Consort, & recent Polymetron</p> <p>K Belling Lee - British meters, EIL, & PYE-Unicam</p> <p>L Beckman - Beckman Chem-Mate, Phistol, Expand-Mate & Select-Mate</p> <p>M Electrofact - Electrofact & some Phillips</p> <p>N Lemo - Seybold</p> <p>R Metrohm F - Recent Metrohm</p> <p>T No Connector - Stripped & Tinned</p> <p>U Banana - Reference & Redox electrodes</p> <p>V Lemo Recent Mettler</p> |
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