

Riviera  
Glass  
Pvt.  
Ltd.

*Riviera*

**DURAN**

*Riviera*

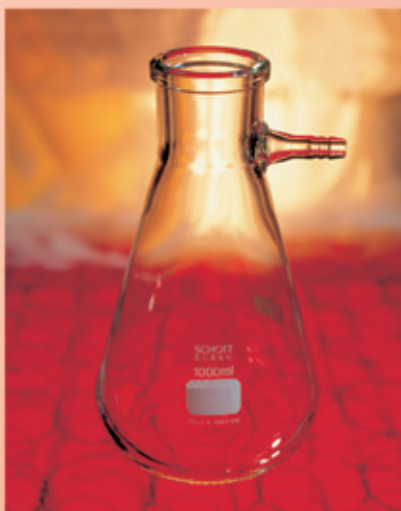
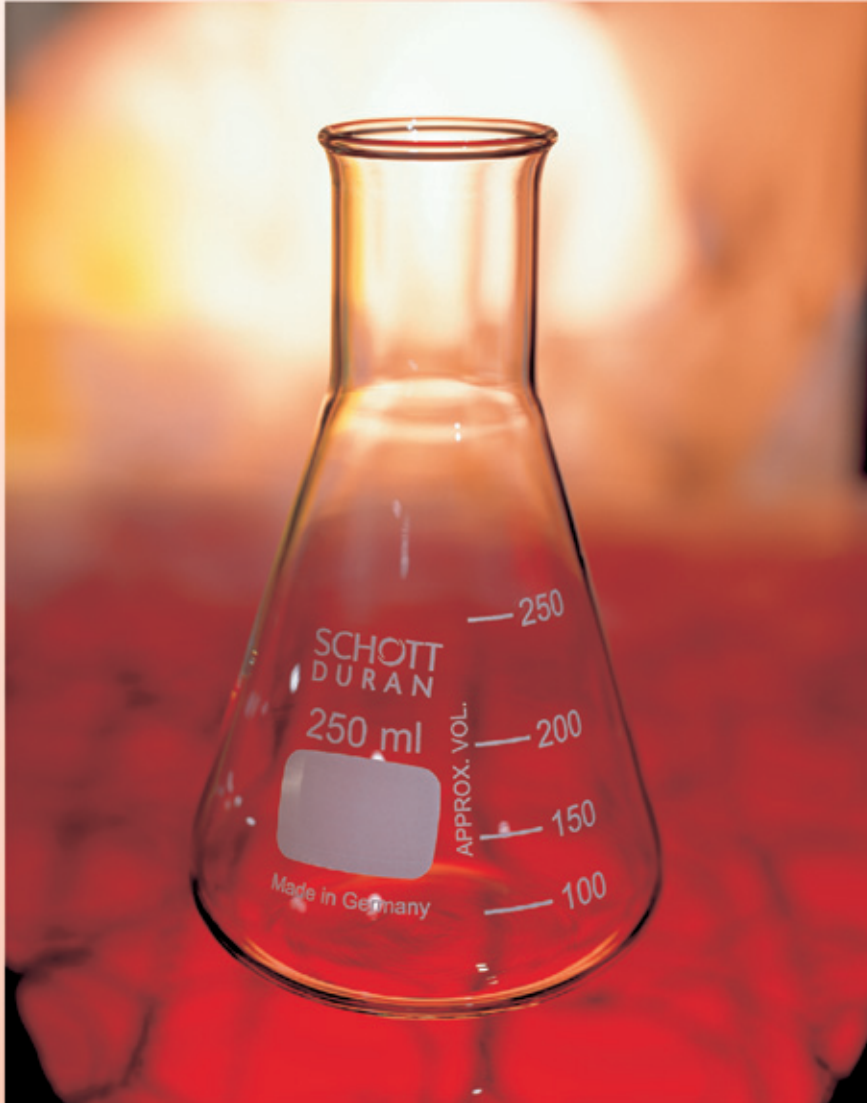
**RIVOTEK**



**Price List 2013 - 14**

[www.rivieraglass.co.in](http://www.rivieraglass.co.in)

# Laboratory Glassware





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**Catalogue - cum - Price List**  
**w. e. f. 01-04-2013**  
**VAT / Local Sales Taxes Extra**



**Riviera**

*In this catalogue - cum - price list  
we have provided the necessary  
technical details and dimensional  
specifications. These are  
subject to changes without notice.*

*For further details please contact  
us at our Head Office address  
at Mumbai.*





**DURAN GROUP GmbH., Germany**  
**The Laboratory Glassware Specialists**

The DURAN GROUP is one of the world's leading manufacturers of borosilicate glass, a special glass invented by Dr. Otto Schott in 1887 and registered in 1938 under the trade name DURAN. With sites in Mainz (DURAN Produktions GmbH & Co .KG), Wertheim (DURAN Group GmbH) and Pula (DURAN d.d.), the DURAN GROUP has a complete value added chain from the glass melting process right through to glass forming and processing.

Over the last 70 years, DURAN glass has proven itself both in laboratories as well as in industrial and domestic applications. At the same time their special industrial glass is used in numerous industries, amongst others, mechanical engineering, the electrical industry and medical technology. Well-known companies spread across all continents trust in the quality of their products. DURAN GROUP achieves solutions, based on close dialogue with the customers, which meet individual requirements and permit highly precise applications in widely varying sectors.

After its spin-off from SCHOTT AG, the DURAN GROUP currently combines the strengths of its long history with the constantly present visionary spirit of the inventor Otto Schott.

The unique precision involved in the manufacturing and processing of DURAN glass is the foundation of their corporate philosophy and guideline for their day-to-day operations.

**QUALITY WITHOUT COMPROMISE**

Developing and manufacturing reliable and safe products in accordance with the highest quality possible quality standards is at the very centre of DURAN GROUP's quality policy. Its Quality Management System conforms to DIN EN ISO 9001:2000 and is integrated into daily practice.

Name	Melt No.	Linear Coefficient of expansion $\alpha_{20/300^\circ}$ $10^{-6}K^{-1}$	Transformation Temperature $^\circ C$	Density $g/Cm^3$
DURAN	8330	3.3	525	2.23
SUPREMAX	8409	4.1	745	2.57
FIOLAX	8412	4.9	565	2.34
AR/GLAS/ Soda-lime- Silicate glass	8350	9.1	525	2.50

**Types of glass for Laboratory Glassware manufacture**

Laboratory Glassware can be manufactured from many types of glass like DURAN, SUPREMAX, FIOLAX, AR-GLAS etc whose basic characteristics can be seen from the table above.

Unless stated otherwise, all products are made of DURAN borosilicate glass. Articles made of other glasses are specifically indicated in the catalogue.

**DURAN The Laboratory glassware from DURAN GROUP**

DURAN is borosilicate glass type 3.3 as specified in international standard ISO 3585 and DURAN products meet the most important international standards, for example, the German, British, American and French standards, Maximum chemical resistance, minimum thermal expansion and the resulting high resistance to thermal shock are its principal properties. This optimum physical and chemical performance makes DURAN the ideal material for use in the laboratory and for large-scale industrial plants for the chemical industry. Moreover, it is widely used on an industrial scale in all other areas of application in which extreme heat resistance, resistance to thermal shock, mechanical strength and exceptional chemical resistance are required.

**Definition**

Glass is an inorganic mixture fused at high temperature which solidifies on cooling but does not crystallize. It's basic components, network formers and modifiers are present in the form of oxides in ordinary glasses. Typical glass formers (network formers) are silica ( $SiO_2$ ), boric acid ( $B_2O_3$ ), Phosphoric acid ( $P_2O_5$ ) and, under certain circumstances, also aluminum oxide ( $Al_2O_3$ ). These substances are capable of absorbing (dissolving) certain amount of metal oxide without losing their glassy character. This means that the incorporated oxides do not participate as glass formers but modify certain physical properties

of the glass structure as "Network modifiers".

### Glass Structure

A large number of chemical substances solidify from the liquid state of melt in the form of glass. The glass formation depends on the cooling rate and requires mixed types of bonding (covalent bond and ionic bond) between the atoms or atom groups. As a result, glassforming products have a strong tendency while still in the melt for three-dimensional crosslinking by polymerisation in a largely random manner. Crystals are formed when the individual atoms form a regular three-dimensional arrangement in what is known as a "Crystal lattice", as soon as the particular substance changes from the liquid to the solid state. Glass, however, on cooling from the liquid state, forms a largely spatially random "network". The main components which participate in the glass formation are therefore called "network formers". Ions can be incorporated in this network of glass-forming molecules, as a result of which they tear up the network in certain places and modify the network structure and thus glass properties. That is why they are called "network modifiers".

### Chemical composition of DURAN

DURAN glass which is used in the laboratory and in industrial scale chemical plant, due to its excellent chemical and physical properties, has the following typical composition :

81% by weight  $\text{SiO}_2$                       4% by weight  $\text{Na}_2\text{O}/\text{K}_2\text{O}$   
 13% by weight  $\text{B}_2\text{O}_3$                       2% by weight  $\text{Al}_2\text{O}_3$

### Why is DURAN essential in the laboratory ?

Otto Schott's discovery of borosilicate glass was a vital step forward in the development of laboratory technology, for it enabled chemists to forge ahead into previously unexplored territory. Outstanding resistance to heat and thermal shock, excellent chemical durability and high mechanical strength are the properties which make it possible for borosilicate glass to be used under the most exacting conditions encountered in laboratory use.

DURAN is borosilicate glass 3.3 How do laboratories benefit from its special properties ?

### Chemical properties

DURAN's chemical durability is far better than that of most metals and other materials, even over long periods of contact and at temperatures of up to 100°C.

The action of water and acids only releases small amounts of ions (mainly monovalent) from the glass. Future attack is inhibited by the

very thin and almost nonporous silica gel layer that then forms on the surface of the glass.

DURAN is highly resistant to water, neutral and acid solutions, concentrated acids, mixtures of acids, chlorine, bromine, iodine and organic substances.

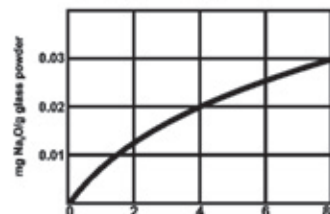
Only hydrofluoric acid, solutions containing fluoride ions (e.g. ammonium fluoride), very hot phosphoric acid and alkaline solutions attack the surface of the glass, the degree of attack increasing as the concentration and temperature rise.

DURAN borosilicate glass is made from carefully selected raw materials so that it is virtually free from impurities, particularly heavy metals. This means that no contamination (even in ppm) of highly critical analysis solutions can occur when DURAN laboratory apparatus is used.

DURAN complies with the following requirements : hydrolytic resistance class 1, ISO 719-HGB1, acid resistance class 1 and alkali resistance 2, ISO 659-A2.

### Resistance to water

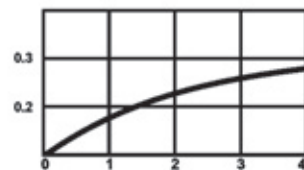
DURAN is specified as hydrolytic resistance class ISO 719-HGB 1 because in glass powder tests to DIN 12111, ISO 719, only 0.026 ml HCl ( 0.01 mol/l) is dissipated from 1 g of glass powder after being held in water at 98°C for one hour. This corresponds to an alkali weight loss of 0.008 mg  $\text{Na}_2\text{O}$  per 1 g glass powder.



Water attack on DURAN as a function of time (100°C) to DIN 12 111, ISO 719

### Acid resistance

DURAN is specified as acid resistance class 1 because in tests to DIN 12116 on fire polished DURAN surfaces a weight loss of only 0.3 mg /dm<sup>2</sup> is measured after boiling for three hours in 18% hydrochloric acid.

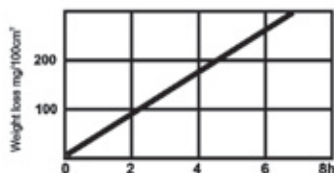


Acid attack on DURAN as a function of time to DIN 12 116

### Alkali resistance

DURAN is specified as alkali resistance class ISO 695 - A2 because in tests to DIN 52322, ISO 695, on fire polished DURAN surfaces a

weight loss of only 134 mg/dm<sup>2</sup> is measured after boiling for three hours in a mixture comprising equal parts by volume of sodium hydroxide solution (concentration 1 mol/l) and sodium carbonate solution (concentration 0.5 mol/l)



Alkali attack on DURAN as a function of time to DIN 52 322, ISO 695

### Thermal properties

DURAN has a very low coefficient of expansion and this gives it a high resistance to thermal shock.

Its maximum permissible operating temperature is 500°C for short term use and its thermal shock resistance is more than 3 times greater than that of conventional glass. Its linear coefficient of expansion over the temperature range 20°C to 300°C is  $3.3 \times 10^{-6} /K$

### Optical properties

DURAN shows no noticeable absorption in the visible region of the spectrum and it, therefore, appears clear and colourless. Where fairly large thickness is involved (e.g. when viewing a tube axially) a greenish tint can be seen.

For use with light-sensitive materials the surface of the glass can be amber stained. This causes heavy absorption in the shortwave range. The absorption limit of tinted glass is approximately 500<sup>nm</sup>.

In the spectral range of approximately 310 to 2200<sup>nm</sup> the absorption of DURAN is negligible.

### Ecologically harmless

Special glass is considered completely safe ecologically. Glass is manufactured from natural raw materials (sand, calcium carbonate and sodium carbonate) and does not contain any materials which could be released and constitute a hazard to man or the environment. Glass can be reused several times and disposed of without difficulties.

### Use in microwave apparatus

DURAN laboratory glass is suitable for use in microwave apparatus.. These excellent chemical and physical properties make DURAN the ideal material for laboratory and pilot plant use.

### Physical properties and characteristics

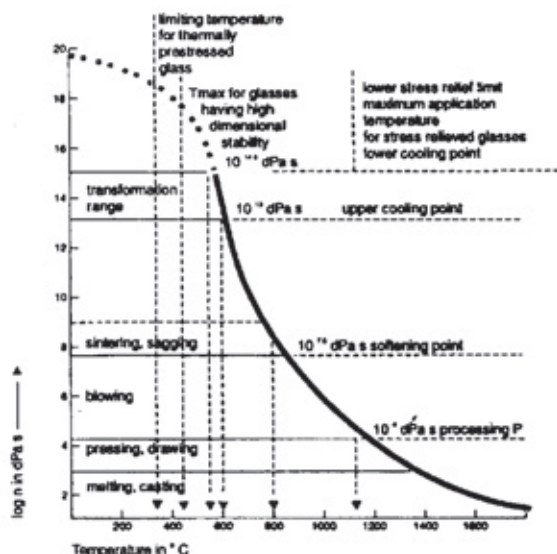
#### For the processing of DURAN by glassblowers

Maximum use Temperature 500°C

Transforming Temperature 525°C

DIN-ISO 3585

Upon cooling from the melting temperature ( $10^1$  to  $10^3$  dPa s), the glasses go through a wide range of viscosity, which ranges from a relatively viscous region (at about  $10^4$  to  $10^8$  dPa s) to the plastic range ( $10^8$  to  $10^{12}$  dPa s) and up into the known elastic brittle state ( $>10^{13}$  dPa s). Thus, glass shows a constant increase in viscosity upon cooling and has no solidification point as is the case for crystalline substances. For the processing of glass, certain sections of the viscosity range are of particular importance. In the transformation range, the elastic brittle behaviour of the glass changes to a noticeably viscous behaviour with increasing temperature, which significantly changes all physical and chemical properties as a function of temperature. Thus the temperature region of the transformation range determines the elimination of stress during heating and the onset of stresses during cooling of the glass. The position of the transformation range is indicated by the transformation temperature  $T_g$  DIN 52324.



Normal temperature dependence / viscosity curve of DURAN glass. Viscosity ranges of important processing techniques, position of fixed points of viscosity and various limiting temperatures

To eliminate permanent stresses, DURAN is heated to a maximum temperature of 550°C and kept at this temperature for 30 minutes. For the cooling which follows, the cooling rates listed in the table below are recommended.

Temperature range	550 to 480°C	480 to 400°C	400 to 20°C
Glass thickness	Cooling rate		
3 mm	12deg/min	24deg/min	to 480 deg/min
6 mm	3 deg/min	6 deg/min	to 120 deg/min
12 mm	0.8deg/min	1.6 deg/min	to 32 deg/min

These data are those of today's knowledge and are intended to provide information on SCHOTT products and their possible applications. Thus, their meaning is not to ensure certain properties of the products or their suitability for a particular application purpose.

**HIRSCHMANN LABORGERATE GmbH & Co. KG. GERMANY  
The Volumetric Laboratory Glassware Specialists.**

The Company was founded in 1967 by Mr. A. M. Hirschmann, who started in a very modest way producing volumetric glassware for laboratories.

Today, after 31 years, they operate in many countries across the globe and are acknowledged as one of the leading companies in Europe in volumetric glassware having a 25% market share.

All the products have the registered trademark HIRSCHMANN EM-TECHCOLOR and all the patents are owned by Mr. Hirschmann and members of the staff. The offered products are of very high quality, developed and produced in house with help of computer operated & computer controlled - all the programmes are developed in house - working steps so that a high productivity is associated with high quality at all times.

These EM - TECHCOLOR volumetric glassware are produced using generally the high quality DURAN glass manufactured by SCHOTT GLASWERKE, Germany because from experience they found out, it is the most precise and dependable.

As a recognition of their efforts, their R & D production, sales and distribution are certified and accredited as per ISO 9001 - a copy of their ISO 9001 certificate is shown in the following page.

**Volumetric Glassware - Classification**

Volumetric glasswares like Pipettes, Burettes, Volumetric Flasks and Measuring cylinders are divided into Classes "A", "AS", and "B".

The class indicates the suitability for certification, degrees of accuracy and DELIVERY and WAITING times.

DELIVERY TIME is the time the liquid meniscus needs to pass from the calibration mark to standstill at the tip or at the second calibration mark.

WAITING TIME starts when the liquid meniscus is in the tip or at the second calibration mark has come to a stop. During the waiting time, "residual liquid" flows downwards from the glass wall. This causes a new rise of the meniscus. After the waiting time, the pipette tip is wiped on the wall of the vessel. A small amount of liquid remains in the narrow section of the tip. But this has been taken into account during calibration.

Generally, the accuracy, tolerances and delivery time vary with the rated volume. The waiting times are pre-set.

CLASS "A" & "AS" - Volumetric Glassware of Classes "A" & "AS" are suitable for certification. They have the same accuracy tolerances but differ in their delivery and waiting times. Glassware of class "AS" have faster delivery time with larger tip apertures.

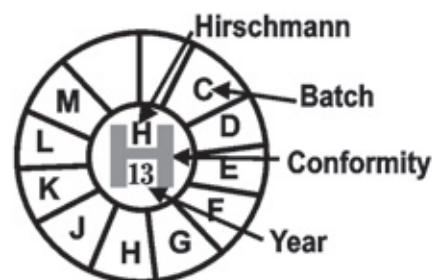
CLASS "B" - Volumetric Glassware of Class "B" are not suitable for certification. They have larger tolerances than Classes "A" & "AS".

**Certificate of Conformity**

For volumetric glassware to be used for research, commercial and pharmaceutical sectors the new German Federal Weights and Measures Regulation of 12th August 1988 calls for conformity certification from the side of the manufacturer instead of issuance of an individual certificate of examination by the manufacturer or by an authorised testing institute. This means that random samples from each production batch are examined, by using prescribed measuring and test equipments. Only when the values of these samples are better than the legally permitted levels, are the products of this batch allowed to be marketed commercially with conformity certification.

Non-conformity arising from human error in the production process cannot be ruled out with the traditional process of certifying conformity. To completely eliminate the human error factor, all EM-TECHCOLOR branded volumetric glassware which are conformity certified are calibrated not 'by hand' but exclusively by a computer - controlled robot. This robot measures the volumes out into the glassware, identifies the meniscus optoelectronically and marks the volumetric glassware. Thereby the robot continuously performs a self analysis and non-conformity arising out of the traditional process is completely eliminated.

In addition to the above mentioned perfect quality assurance HIRSCHMANN now offers an identification/traceability label for all conformity certified volumetric glassware which shows in addition to the usual "H" marking depicting the product to be conformity certified, the production year and an alphabet to identify the production batch. A sample of the label is given below.



The above label shall be printed on every individual conformity certified volumetric glassware of EM TECHCOLOR brand.



### **TRACEABILITY AS REQUIRED BY ISO 9000.**

Apart from the documentation of test equipment which is required to date every volumetric glassware exactly, HIRSCHMANN also offers traceability demanded by ISO 9000. Should any inconsistencies occur when using any EM-TECHCOLOR conformity certified volumetric glassware in any laboratory, HIRSCHMANN is able to check back each production batch document even after many years. However, in case any laboratory wish to document their quality control individually HIRSCHMANN is able to offer on request and on payment of Rs. 600/- per piece an individual conformity certificate.

Thus HIRSCHMANN manufactured EM-TECHCOLOR branded conformity certified volumetric glassware with dated batch identification is ideal for the documentation of volumetric measurement and for total traceability as demanded by ISO 9000.

### **Cleaning of Laboratory Glassware**

#### **Cleaning**

Laboratory glassware can be cleaned manually in a dipping bath or by machine in a laboratory dishwashing machine. A wide range of cleaners and disinfectant cleaners is available for both methods in specialist stores. In order to take good care of the laboratory apparatuses, they should be cleaned immediately after use at low temperature, a short residence time and low alkalinity. Laboratory apparatuses which have come into contact with infectious substances are first cleaned and then sterilised with hot air or steam. This is the only way to prevent impurities from sticking on to the glass and prevent damage of the glasses caused by any adhering chemicals.

#### **Manual cleaning**

Wiping and scouring with a cloth or sponge, each of which is impregnated with a cleaning solution, are generally known. Laboratory glasses must never be treated with abrasive scouring agents or sponges, since this would damage the surface. In the dipping bath procedure the laboratory glasses are as a rule, placed into the cleaning solution at room temperature for 20 to 30 minutes, then rinsed with tap water and then distilled water. Do not lengthen the time of exposure or increase the temperature except in the case of persistent impurities. In the case of laboratory glasses, lengthy times of exposure at more than 70°C should be avoided in alkaline media, since this may result in destruction of the print.

### **Machine cleaning**

The machine cleaning of laboratory glasses in the laboratory dishwasher is a milder treatment than cleaning in a dipping bath. The glasses only come into contact with the cleaning solution during the relatively short washing cycles, when this solution is sprayed on to the glass surface via spray or injector nozzles.

### **Important notes for the user !**

When working with glass, the limits of this material upon change in temperature and mechanical stress must be heeded and strict safety precautions must be observed :

- Never subject glassware to abrupt changes in temperature. Thus, do not remove it from the drying oven while hot and place it on a cold or, which is worse, a wet laboratory bench. This is true in particular of thick walled glassware, such as suction flasks or desiccators.
- Provide apparatuses with a support via a suitable stand and set up free of stress. Use for example, PTFE corrugated bellows to compensate for stresses or vibrations.
- Glass apparatus (e.g. filtering flasks, desiccators, etc.) Must be handled with care when under pressure or vacuum.
- To avoid setting up stresses in the glass, glass vessels under vacuum or pressure should not be heated from one side or with an open flame.
- Before evacuating or pressurising glass vessels always check visually that they are not damaged in any way (heavy scratching or other mechanical damage.) Damaged items should not be used under vacuum or pressure.
- Never subject to abrupt changes in pressure for example never aerate evacuated glassware abruptly. Flat bottomed glassware (for examples Erlenmeyer or flat-bottomed flasks) must not be subjected to pressure or vacuum.

### **Notes on complaints :**

In spite of all the quality control measures should you have a product complaint in relation to laboratory glasswares included in this catalogue, then please contact our Authorised Dealers or us directly.

Plastics used with laboratory glass		Temperature resistance up to °C
PE	Polyethylene	- 40 to + 80
PP <sup>2</sup>	Polypropylene	- 40 <sup>4</sup> to + 140 <sup>4</sup>
PBT <sup>2</sup>	Polybutyleneteraphthlat	- 45 to + 200 <sup>3</sup>
PTFE <sup>2</sup>	Polytetrafluoroethylene	- 200 to + 260
FEP	Tetra-Fluor-Ethylene/Hexafluor-Propylene	- 200 to + 200
ETFE <sup>2</sup>	Partially crystalline ethylene/ tetrafluoroethylene copolymer	-100 to + 180
VMQ <sup>2</sup>	Silicone rubber	- 50 to + 230
EPDM	Ethylene/propylene-diene-rubber	- 45 to + 150
PU <sup>1</sup>	Polyurethane	- 20 to + 135
FKM	Fluorinated rubber	- 20 to + 200
POM	Polyoxymethylene	- 40 to + 90

<sup>1</sup> All laboratory glasses coated with PU may only be cleaned while moist in order to avoid any electrostatic charge which may form.

<sup>2</sup> These plastic types are recommended by the BGA (Bundesgesundheitsamt- Federal Department of Health) in accordance with the specifications applicable in each case.

<sup>3</sup> Changes in colour may occur at temperature stresses above 180°C.

<sup>4</sup> For a short time without mechanical stress.

#### Chemical resistance of plastics

Classes of substances + 20°C	PE	PP	PBT	PTFE/FEP	ETFE	VMQ	EPDM	PU	FKM	POM
Alcohols, aliphatic	++	++	++	++	++	+	+	++	-	+
Aldehydes	+	+	++	++	++	+		++		+
Alkaline solutions	++	++	+/-	++	++	-	++	++	+	+
Esters	+	+	+	++	++	-	++	+	-	-
Ethers	-	-	+	++	++	-	-	+	-	+
Hydrocarbons aliphatic	-	++	++/+	++	++	-	++	++	++	+
Hydrocarbons aromatic	-	+	++/+	++	++	-	+	++	++	+
Hydrocarbons halogenated	-	+		++	++	-	+	-	++	+
Ketones	+	+	+/-	++	+	-	++	+	-	+
Acids dilute or weak	++	++	++	++	++	-	++	++	++	+
Acids, treated or strong	++	++	+	++	++	-	++	+	++	-
Acids, oxidising (oxidising agents)	-	+	-	++	+	-	-	+	+	-

++ = very good resistance

+ = good to limited resistance

- = low resistance



**DET NORSKE VERITAS**  
**MANAGEMENT SYSTEM CERTIFICATE**

Certificate No. 9660-2007-AQ-IND-RvA Rev. 01

*This is to certify that*

**RIVIERA GLASS PVT. LTD.**

*at*

F-4, III Phase, Thiru-Vi-Ka-Ind.Estate, Ekkaduthangal, Chennai - 600 097, INDIA

*has been found to conform to the Quality Management System Standard:*

**ISO 9001:2008**

*This certificate is valid for the following scope:*

**MANUFACTURING OF LABORATORY SCIENTIFIC GLASSWARE**

*Initial Certification date:*  
01 October 2004

*This Certificate is valid until:*  
01 October 2013

*The audit has been performed under the supervision of:*

**Vetriselvam Krishnasamy**  
*Lead Auditor*



*Place and date of issue:*

Chennai, 14 September 2010

*for the Accredited Unit:*  
DET NORSKE VERITAS CERTIFICATION B.V.,  
THE NETHERLANDS

**Bhupalam Ajit**  
*Management Representative*

Lack of fulfilment of conditions as set out in the Certification Agreement & the annexure to this certificate may render this Certificate invalid.

DET NORSKE VERITAS CERTIFICATION B.V. Zoobweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 688 - [www.dnv.com](http://www.dnv.com) / [www.dnv.nl](http://www.dnv.nl)  
ISSUED BY: DET NORSKE VERITAS AS, ENGLEN CHAMBERS, 10, C.S.T. ROAD, SANTAGRUZ (E), MUMBAI - 400 098, INDIA - [www.dnv.com](http://www.dnv.com) / [www.dnvindia.com](http://www.dnvindia.com)

RIVIERA brand low expansion borosilicate glass specified in this catalogue is heat resistant, chemically neutral, thermally and mechanically strong and is type 3.3, the type which conforms to international standard ISO 3585. Typical glass composition is

SiO<sub>2</sub> - 81% by weight

B<sub>2</sub>O<sub>3</sub> 13% by weight

Na<sub>2</sub>O / K<sub>2</sub>O 4% by weight

Al<sub>2</sub>O<sub>3</sub> 2% by weight

RIVIERA brand borosilicate glass of 3.3 expansion has the same chemical properties as is generally required for borosilicate chemically neutral glass such as hydrolytic resistance, acid

resistance class 1 and alkali resistance. Because of its low coefficient of expansion it gives high resistance to thermal shock. Similarly its optical properties are also good which make the absorption very negligible resulting in a clear and colourless glass.

RIVIERA borosilicate low expansion glass does not contain any materials which could constitute a hazard to man or the environment. The glass can be reused several times and disposed of without any difficulties.

Glass fabricators/manipulators may take note that the maximum use temperature and transforming temperature for RIVIERA Flasks is 500°C and 525°C, respectively.

# Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. 01 100 060671/02

TÜV Rheinland Cert GmbH certifies:

Certificate Holder:

 **DURAN GROUP**

**DURAN Group GmbH**  
Otto-Schott-Straße 21  
D - 97877 Wertheim

Scope:

Sales of laboratory glassware, filter discs, precision glass tubes, x-ray bulbs, special CRT, fiber-reinforced glass composites, hollow glassware for small electrical appliances and domestic, pressed glass for domestic and technical applications, products from borosilicate glass 3.3 for industry, laboratory and household, catalogue ware

An audit was performed, Report No. 060671. Proof has been furnished that the requirements according to ISO 9001:2008 are fulfilled.

Validity:

The certificate is valid in conjunction with the main certificate from 2012-07-09 until 2015-06-11.

2012-07-11



TÜV Rheinland Cert GmbH  
Am Grauen Stein · 51105 Köln



DGA-ZM-58-95-00



**Beakers, Low Form, with Graduation and Spout,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70100 08	5	20	25	10	56.00
70100 10	10	25	32	10	57.00
70100 14	25	34	45	10	63.00
70100 17	50	42	55	10	53.00
70100 24	100	50	73	10	55.00
70100 29	150	56	83	10	58.00
70100 36	250	70	95	12	60.00
70100 41	400	80	110	12	99.00
70100 44	500	85	120	6	97.00
70100 48	600	90	125	6	102.00
70100 54	1000	105	145	6	199.00
70100 63	2000	130	185	4	385.00
70100 68	3000	150	210	1	975.00
70100 73	5000	161	253	1	1430.00
70100 86	10000	215	340	1	4595.00

\*5 ml & 10 ml will be supplied without graduation

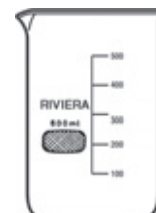
**Beakers, Low Form, with Graduation and Spout, DURAN** DIN 12331, ISO 3819



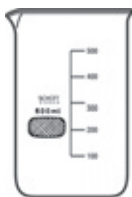
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21106 14	25	34	50	10	138.00
21106 17	50	42	60	10	122.00
21106 24	100	50	70	10	87.00
21106 29	150	60	80	10	105.00
21106 36	250	70	95	10	73.00
21106 41	400	80	110	10	132.00
21106 48	500/600	90	125	10	118.00
21106 54	1000	105	145	10	237.00
21106 63	2000	132	185	10	443.00
21106 68	3000	152	210	4	1037.00
21106 73	5000	170	270	1	1479.00
21106 86	10000	217	350	1	6039.00

\*10000 ml Capacity is a non - DIN non - ISO size and will be supplied without graduation

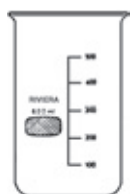
**Beakers, Tall Form, with Graduation and Spout,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



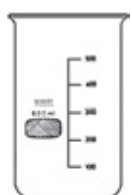
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70110 17	50	38	70	24	94.00
70110 24	100	48	80	24	99.00
70110 29	150	54	95	12	100.00
70110 36	250	60	120	12	102.00
70110 44	500	75	140	6	138.00
70110 54	1000	95	180	6	277.00
70110 63	2000	120	240	1	465.00



Beakers, Tall Form, with Graduation and Spout, DURAN					DIN 12331, ISO 3819	
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
21116 17	50	38	70	10	150.00	
21116 24	100	48	80	10	150.00	
21116 29	150	54	95	10	152.00	
21116 36	250	60	120	10	138.00	
21116 41	400	70	130	10	166.00	
21116 48	500/600	80	150	10	221.00	
21116 54	1000	95	180	10	489.00	
21116 63	2000	120	240	10	743.00	
21116 68	3000	135	280	2	1087.00	



Beakers, Tall Form, with Graduation without Spout, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA					
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70120 36	250	60	120	12	97.00
70120 44	500	75	140	6	132.00
70120 54	1000	95	180	6	272.00



Beakers, Tall Form, with Graduation without Spout, DURAN					DIN 12331, ISO 3819	
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
21117 17	50	38	70	10	148.00	
21117 24	100	48	80	10	152.00	
21117 29	150	54	95	10	152.00	
21117 36	250	60	120	10	138.00	
21117 41	400	70	130	10	166.00	
21117 48	500/600	80	150	10	221.00	
21117 54	1000	95	180	10	488.00	



Beakers, Philips with Spout, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA					
Cat No.	Capacity ml	Base Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70130 36	250	75	113	10	252.00
70130 44	500	90	170	10	319.00



Beakers, Philips with Spout, DURAN						
Cat No.	Capacity ml	Base Dia mm	Mouth Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21141 29	150	59	49	87	10	530.00
21141 36	250	68	52	105	10	455.00
21141 44	500	86	59	142	10	571.00



**Bottles, Aspirator, Graduated, with GL 45 Screwthread and Autoclavable Cap Complete with NS Stopcock and Joint, Made from DURAN Laboratory Bottles**

Cat No.	Capacity ml	Bottle O. D. mm	Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24703 54	1000	101	230	1	1975.00
24703 63	2000	136	267	1	2287.00
24703 73	5000	183	340	1	8147.00
24703 86	10000	230	415	1	10913.00
24703 91	20000	295	510	1	17921.00



**Bottles, B.O.D., with I/C Stopper, RIVIERA**

Suitable for determination of B.O.D. in industrial effluents, wastes and water as per method specified by the American Public Health Association

Cat No.	Capacity ml	App. O.D.x Height of Bottle only mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74100 365	300	73 x 131	10	490.00



**Bottles Reagent, Narrow Mouth, Plain, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70200 18	60	10	265.00
70200 25	125	10	285.00
70200 36	250	10	300.00
70200 44	500	10	327.00
70200 54	1000	8	475.00
70200 65	2500	1	790.00
70200 73	5000	1	4835.00
70200 86	10000	1	7711.00
70200 91	20000	1	13167.00



**Bottles Reagent, Narrow Mouth, AMBER, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70210 18	60	10	359.00
70210 25	125	10	380.00
70210 36	250	10	433.00
70210 44	500	10	523.00
70210 54	1000	8	675.00
70210 65	2500	1	1160.00




**Bottles Reagent, with I/C Joint and Glass Stopper, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
211611 17	50	B 14	10	404.00
211612 24	100	B 19	10	409.00
211612 36	250	B 19	10	433.00
211613 44	500	B 24	10	499.00
211614 54	1000	B 29	10	710.00
211615 63	2000	B 34	10	1210.00


**Bottles Reagent, with I/C Joint and Glass Stopper, AMBER, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
211661 17	50	B 14	10	669.00
211662 24	100	B 19	10	753.00
211662 36	250	B 19	10	795.00
211663 44	500	B 24	10	963.00
211664 54	1000	B 29	10	1312.00
211665 63	2000	B 34	10	2176.00


**Bottles, Solution, CLEAR, Tooled Neck, DURAN**
**DIN 12035, ISO 4796**

Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21161 17	50	44	80	10	262.00
21161 24	100	54	95	10	310.00
21161 36	250	73	131	10	319.00
21161 44	500	89	162	10	331.00
21161 54	1000	111	200	10	553.00
21161 63	2000	138	246	10	954.00
21161 73	5000	186	318	1	7399.00
21161 86	10000	234	398	1	10134.00
21161 91	20000	300	492	1	19541.00


**Bottles, Solution, AMBER, Tooled Neck, Made from DURAN**

Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21166 17	50	44	80	10	476.00
21166 24	100	54	95	10	560.00
21166 36	250	73	131	10	602.00
21166 44	500	89	162	10	718.00
21166 54	1000	111	200	10	1010.00
21166 63	2000	138	246	10	1695.00


**Bottles, Relative Density, Accuracy as per I. S. 5717 : 1970 with Capillary Bore, I/C Teflon Stopper, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Capacity Tolerance ± ml	Max. Body Dia x Height mm	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70910 10	10	1	24 x 46	B 10	10	342.00
70910 25	25	2	38 x 56	B 10	10	375.00
70910 50	50	3	49 x 66	B 10	2	400.00



**Bottles, Weighing, with I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	App. O. D. x Ht. of Bottle only mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70900 05	5	20 x 40	10	211.00
70900 15	15	25 x 60	10	232.00
70900 25	25	30 x 65	10	274.00
70900 60	60	40 x 90	4	422.00



**Bottles, Weighing, Squat Form, with I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	App. O. D. x Ht. of Bottle only mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70900 20	20	50 x 35	10	476.00
70900 40	40	60 x 40	10	660.00



**Bottles, Wash, Complete with I/C Pressure and Delivery Tube,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74210 36	250	24/29	10	500.00
74210 44	500	24/29	10	660.00
74210 54	1000	29/32	10	825.00



**I/C Pressure and Delivery Tube only for Wash Bottle,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74211 36	250	24/29	10	370.00
74211 44	500	24/29	10	405.00
74211 54	1000	29/32	10	420.00



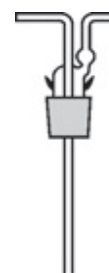
**Bottles, Gas Washing, Complete with I/C Pressure and Delivery Tube,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74212 25	125	29/32	10	812.00
74212 36	250	29/32	10	871.00
74212 44	500	29/32	10	1046.00



**I/C Pressure and Delivery Tube only for Gas Washing Bottle,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74213 25	125	29/32	10	452.00
74213 36	250	29/32	10	473.00
74213 44	500	29/32	10	537.00





**Bottles only for Gas Washing Bottle,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Approx. O. D. x Ht. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74214 25	125	50 x 155	10	734.00
74214 36	250	60 x 190	10	810.00
74214 44	500	70 x 245	10	994.00

**LABORATORY BOTTLES, DURAN**

DURAN laboratory bottles are chemically resistant and stable. When fitted with a plastic pouring ring dripping can be totally eliminated. As there is only one size screw thread for all bottles from 100 ml onwards, the screw caps and pouring rings are fully interchangeable. The bottles, pouring rings and caps are autoclavable and sterilizable.

**PROPERTIES :**

**Light protection**

- Amber bottles upto 500 ml
- Plastic coated bottles upto 380 nm useable as safe storage for chemicals

**Safe closure ensures storage of products as**

- Dairy products
- Serums are kept sterile

**High resistance to thermal shock**

**HANDLING :**

**Freezing substances**

**Recommendation :** When freezing, always place the bottles at an angle (approx. 45°) and do not fill to more than 3/4 capacity (to increase surface area). Temperature limit -40°C as the plastic caps and pouring rings do not withstand lower temperatures.

**Thawing frozen substances**

The frozen material can be thawed by immersing the bottle in a liquid bath taking care that the temperature difference does not exceed 100°C. This will ensure that the frozen material is heated uniformly from all sides without damaging the bottle. It can, however, also be thawed slowly so that the surface melts first, allowing the material to expand.

**Sterilization**

Bottles can be steam sterilized after washing. Following are the recommendation and guidelines :

Steam sterilization refers to "the destruction or irreversible inactivation of all microorganisms capable of reproduction" (DIN 58900, pt1, 1986) by

means of "saturated steam at a minimum of 120°C and 2 bar" (DIN 58946, pt1, 1987). The minimum effective application time (destruction time + safety factor) is indicated in DIN 58946, pt2 as a duration of 20 minutes at a sterilization temperature of 121°C.

The following should be noted with respect to preparation for sterilization

- Soiled bottles must be cleaned first, otherwise microorganisms cannot be effectively destroyed and chemicals adhering to the surface can damage it as a result of high temperature involved.
- To avoid a build up of pressure the screw cap should be left loose on the bottle neck (one turn maximum). It should not be closed tight as the pressure then cannot be balanced and the consequent difference in pressure can result in the bottle bursting.
- Ensure that saturated steam is used and that it has unhindered access to all contaminated places. This is the only way to achieve effective steam sterilization.

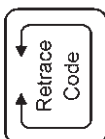
**LABORATORY BOTTLES WITH PLASTIC COATING, DURAN**

The resistant and transparent copolymer based plastic coating bonds firmly with the glass surface and performs the following functions :

- Protects the glass surface against mechanical damage (Scratch protection)
- Holds the fragments together in the event of the glass breaking (Splinter protection)
- Minimises liquid loss in the event of the glass breaking (Protection against contents escaping and spraying)
- Absorbs UV rays upto a light wavelength of 380 nm (Light protection)

**Do not expose plastic coated bottles to open flames or direct heat, e.g. on a laboratory hot plate. The maximum operating temperature is 135°C. Bottle should not be exposed to this temperature for more than 30 minutes.**

**Plastic coated bottles are suitable for freezing (-30°C) and it can also be used in microwaves. However, the plastic coating does not increase the permissible pressure at which they can be used.**



**Bottles, Laboratory, with DIN thread, Graduated, CLEAR, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, DURAN** **ISO 4796**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21801 085	10	25	36	50	10	320.00
21801 145	25	25	36	74	10	243.00
21801 175	50	32	46	91	10	285.00
21801 245	100	45	56	105	10	291.00
21801 295	150	45	62	115	10	300.00
21801 365	250	45	70	143	10	300.00
21801 445	500	45	86	181	10	329.00
21801 515	750	45	95	208	10	433.00
21801 545	1000	45	101	230	10	520.00
21801 635	2000	45	136	265	10	901.00
21801 695	3500	45	160	300	1	4216.00
21801 735	5000	45	182	335	1	4982.00
21801 865	10000	45	227	415	1	8809.00
21801 885	15000	45	268	450	1	15777.00
21801 915	20000	45	288	510	1	16706.00

\*10 & 25 ml Bottles will be supplied without pouring ring because of the specially formed glass tip.



**Bottles, Laboratory, with DIN thread, Graduated, CLEAR, with Tamperproof PP Screw Cap and PP Pouring Ring, Autoclavable upto 140°C, DURAN** ISO 4796

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21802 365	250	45	70	143	10	415.00
21802 445	500	45	86	181	10	452.00
21802 545	1000	45	101	230	10	638.00
21802 635	2000	45	136	267	10	1011.00
21802 735	5000	45	183	340	1	5192.00



**Bottles, Laboratory, Round, Wide Mouth, Plain, with PP Caps, DURAN**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21860 365	250	80	95	105	10	598.00
11126 275	500	80	101	152	10	637.00
11127 135	1000	80	101	222	10	760.00
11127 155	2000	80	136	252	10	1625.00
21860 695	3500	80	160	275	1	5625.00
11139 495	5000	80	182	314	1	7350.00
11139 505	10000	80	227	389	1	12750.00
11139 515	20000	80	288	484	1	27500.00
12002 655	30000	80	340	548	1	53700.00
12001 545	50000	80	400	590	1	99875.00



**Bottles, Laboratory, Square, with DIN thread, Graduated, CLEAR, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, Suitable for Milk Dilution Application, DURAN**

Cat No.	Capacity ml	DIN-thread GL	Width mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21820 245	100	32	50	109	10	415.00
21820 365	250	45	64	143	10	442.00
21820 445	500	45	78	181	10	493.00
21820 545	1000	45	94	222	10	743.00



**Bottles, Laboratory, Square, with DIN thread, Graduated, CLEAR, with Tamper proof PP Screw Cap and PP Pouring Ring, Autoclavable upto 140°C, DURAN**

Cat No.	Capacity ml	DIN-thread GL	Width mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21821 365	250	45	64	143	10	551.00
21821 445	500	45	78	181	10	601.00
21821 545	1000	45	94	222	10	852.00





**Bottles, Laboratory, with DIN thread, Graduated, Plastic Coated, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, DURAN PROTECT** ISO 4796

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10926 765	25	25	36	70	10	849.00
10926 775	50	32	46	87	10	894.00
21805 245	100	45	56	105	10	1003.00
21805 295	150	45	62	115	10	1035.00
21805 365	250	45	70	143	10	1158.00
21805 445	500	45	86	181	10	1183.00
21805 515	750	45	95	208	10	1592.00
21805 545	1000	45	101	230	10	1670.00
21805 635	2000	45	136	267	10	2678.00
21805 695	3500	45	160	300	1	8809.00
21805 735	5000	45	182	330	1	11475.00



**Bottles, Laboratory, with DIN thread, Graduated, AMBER, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, Made from DURAN**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21806 085	10	25	36	50	10	459.00
21806 145	25	25	36	74	10	382.00
21806 175	50	32	46	91	10	447.00
21806 245	100	45	56	105	10	471.00
21806 295	150	45	62	115	10	514.00
21806 365	250	45	70	143	10	503.00
21806 445	500	45	86	181	10	573.00
21806 515	750	45	95	208	10	733.00
21806 545	1000	45	101	230	10	814.00
21806 635	2000	45	136	265	10	1367.00
21806 695	3500	45	160	300	1	7508.00
21806 735	5000	45	182	335	1	8095.00
21806 865	10000	45	227	415	1	12150.00
21806 885	15000	45	268	450	1	22948.00
21806 915	20000	45	288	510	1	24300.00

\*10 & 25 ml Bottles will be supplied without pouring ring because of the specially formed glass tip.



**Bottles, Laboratory, with DIN thread, Graduated, without Cap, Autoclavable upto 140°C, DURAN**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21801 08	10	25	36	50	10	269.00
21801 14	25	25	36	70	10	191.00
21801 17	50	32	46	87	10	233.00
21801 24	100	45	56	100	10	240.00
21801 29	150	45	62	110	10	249.00
21801 36	250	45	70	138	10	249.00
21801 44	500	45	86	176	10	278.00
21801 51	750	45	95	203	10	382.00
21801 54	1000	45	101	225	10	468.00
21801 63	2000	45	136	260	10	849.00
21801 69	3500	45	160	295	1	4164.00
21801 73	5000	45	182	330	1	4930.00
21801 86	10000	45	227	410	1	8757.00
21801 88	15000	45	268	445	1	15726.00
21801 91	20000	45	288	505	1	16655.00

**NEW**

**Bottles, Laboratory, with DIN thread, Wide Mouth, Graduated, Plastic Coated, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, DURAN PROTECT** ISO 4796-1

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11601 525	500	80	101	148	10	1682.00
11601 635	1000	80	101	218	10	2087.00
11601 645	2000	80	136	248	10	3369.00
21865 695	3500	80	160	271	1	10294.00
11601 655	5000	80	182	311	1	13753.00



**Bottles, Laboratory, with DIN thread, Graduated, Pressure Resistant, without Screw Cap and Pouring Ring, Autoclavable upto 140°C, DURAN PRESSURE PLUS** ISO 1595

Pressure Plus Bottles are the ideal choice where applications involve safe working under pressure or vacuum, sampling under pressure, storage of gas generating media etc. Vacuum and / or pressure resistant from -1 to 1.5 bar due to modified geometry (based on ISO 4796-1). Pressure resistance conforms to DIN ISO 1595 (safety tested by TUV). When under full pressure thermal shock resistance is 30K and maximum usage temperature is +140°C. Graduations are printed in blue for visual differentiation with standard laboratory bottles. Retrace code provided on individual bottles for online generation of batch certificates .

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10922 34	250	45	70	138	10	534.00
10922 35	500	45	86	176	10	699.00
21810 54	1000	45	101	225	10	757.00



**Premium Bottles, Laboratory, with DIN thread, Graduated, with Screw Cap and Pouring Ring (TpCh 260), Thermal Shock Resistant, Autoclavable upto +260°C, DURAN** ISO 4796-1

- Premium Bottles contribute to safety in the laboratory while simplifying handling. Important features are
- With enhanced temperature-resistant screw cap manufactured from TpCh 260 including a matching pouring ring — can be used from -196° C to +260° c. Raw material conforms to USP Clas VI — also PTFE coated silicone seal.
  - Dye-free cap and pouring ring to prevent marking or contamination of vessels, drying chambers and sterilization cabinets.
  - Entire system comprising bottle, cap and pouring ring conforms to USP/FDA. DMF is available upon request. (DMF No. 19757)
  - Ideal for sterilization processes such as hot-air or dry sterilization and depyrogenation particularly in the pharmaceutical industry.
  - Retrace code.
  - Batch Certificates.

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11270 75	100	45	56	100	10	1322.00
11270 76	250	45	70	138	10	1378.00
11270 77	500	45	86	176	10	1491.00
11270 78	1000	45	101	225	10	1772.00



**Bottles, Laboratory, Round, Wide Mouth, AMBER, with PP Caps, DURAN**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21866 365	250	80	95	105	10	1040.00
11627 275	500	80	101	148	10	1111.00
11627 135	1000	80	101	218	10	1191.00
11627 155	2000	80	136	248	10	2467.00
21866 695	3500	80	160	275	1	9140.00
11627 495	5000	80	182	311	1	11943.00
11627 505	10000	80	227	395	1	16299.00
11627 515	20000	80	288	483	1	40038.00





**Bottles, Laboratory, Square, with DIN thread, Graduated, AMBER, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, Made from DURAN**

Cat No.	Capacity ml	DIN-thread GL	Width mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21826 245	100	32	50	109	10	646.00
21826 365	250	45	64	143	10	697.00
21826 445	500	45	78	181	10	792.00
21826 545	1000	45	94	222	10	1066.00



**Bottles, Laboratory, Square, with DIN thread, Graduated, without Cap, Autoclavable upto 140°C, DURAN**

Cat No.	Capacity ml	DIN-thread GL	Width mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21820 24	100	32	50	109	10	363.00
21820 36	250	45	64	143	10	391.00
21820 44	500	45	78	181	10	441.00
21820 54	1000	45	94	222	10	692.00



**PP Screw Cap, without PP Pouring Ring for Laboratory Bottles, Autoclavable upto 140°C, Steam, DURAN**

ColCat No.	DIN thread GL	O. D. mm	Height mm	Colour	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29239 13	25	33	19	Blue	10	82.00
29239 19	32	40	24	Blue	10	82.00
29239 28	45	54	25	Blue	10	82.00
29338 280	45	54	25	Yellow	10	115.00
29338 286	45	54	25	Green	10	115.00
29338 288	45	54	25	Grey	10	115.00
11127 16	80	87	40	Blue	10	200.00



**PP Pouring Ring for Laboratory Bottles, Autoclavable upto 140°C, Steam**

Cat No.	DIN thread GL	Height mm	Colour	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29242 19	32	4	Blue	10	21.00
29242 28	45	4	Blue	10	21.00
10899 11	45	4	Green	10	36.00
10899 14	45	4	Grey	10	36.00
10899 17	45	4	Yellow	10	36.00
11601 66	80	4	Blue	10	162.00



**PBT Screw Cap (Red), without ETFE Pouring Ring for Laboratory Bottles, Autoclavable upto 180°C, Hot-air, DURAN**

Cat No.	DIN thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29240 13	25	33	23	10	420.00
29240 19	32	40	26	10	299.00
29240 28	45	54	28	10	420.00

**ETFE Pouring Ring (Red) for Laboratory Bottles, Autoclavable upto 180°C, Hot-air**


Cat No.	DIN thread GL	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29244 19	32	4	10	100.00
29244 28	45	4	10	100.00

**PP Tamper proof Screw Cap (Blue), for Laboratory Bottles, with DIN Thread, Autoclavable upto 140°C, Steam, DURAN**
**ISO 4796**


These caps are used for safely storing the contents of the bottles. The caps are screwed tightly on to the bottles and after a soft "click" the plastic ring is fixed on the bottle neck. When the caps are opened for the first time, a perforation of the plastic ring is broken thus showing the bottle has been opened. After the perforation of the plastic ring is broken, the cap may of course still be used as an "ordinary" screw cap.

Cat No.	DIN thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10175 26	45	54	26	10	160.00

**PP Membrane Cap - with PTFE permeable foil, DURAN**

These caps can be used for all bottles with GL 45 thread and has a hole bored in the centre and a welded-in 0.2  $\mu$ m PTFE foil. They are temperature resistant upto 140 °C and an extremely quick 2-way pressure compensation from 0.1 bar. These are especially suitable for filling, packing, transporting and storing gas - generating media, storing critical substances and in various biotechnological applications. To autoclave media in laboratory bottles, the membrane cap, unlike ordinary caps, is screwed tightly on to the bottles and there is no need for screwing and unscrewing the cap before or after the autoclaving process.



Cat No.	DIN thread GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11832 50	25	5	510.00
11832 51	32	5	535.00
10886 55	45	5	482.00
11601 68	80	2	674.00

**PBT Screw Cap, with Aperture (Red) for Laboratory Bottles, Autoclavable upto 200°C, Hot-air, DURAN**


Cat No.	DIN thread GL	Aperture Bore mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29227 08	32	20	10	208.00
29227 10	45	34	10	327.00

**Premium Cap for Laboratory Bottles, DURAN**

Made of TpCh260 (similar to PFA) with PTFE coated silicone seal and pouring ring of TpCh260 Compound formulated without colour dye to avoid risk of leaching. Very high chemical resistance. High leak tightness through use of PTFE coated silicone seal. DMP (No. 19757, in conjunction with premium bottle) available upon request.

**Typical application :** due to its properties, ideal for applications in the pharmaceutical industry, handling of aggressive media, demanding sterilization processes such as hot air or dry sterilization and depyrogenation.

**Easy Sterilization :** The 'Premium Cap' is characterised by its temperature resistance ranging from -196 °C to +260 °C. Due to high temperature range, this cap is suitable for many sterilization methods such as autoclaving or dry sterilization.

**FDA Conformity :** The 'Premium Cap' meets all requirements of both US Pharmacopoeia (USP Class VI) and European Pharmacopoeia (EP) and therefore also complies with FDA standards.



Cat No.	Description	DIN Thread GL	Colour	d mm	h mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11296 00	Cap	25	Colourless	32	22	5	444.00
89299 1304	Cap	25 - STERCLIN	Colourless	32	22	20	538.00
10886 79	Cap	45	Colourless	51	26	5	870.00
10886 78	Pouring Ring	45	Colourless	-	4	5	225.00

## DURAN BAFFLED FLASKS

### Why use baffled flasks?

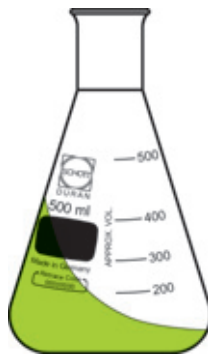
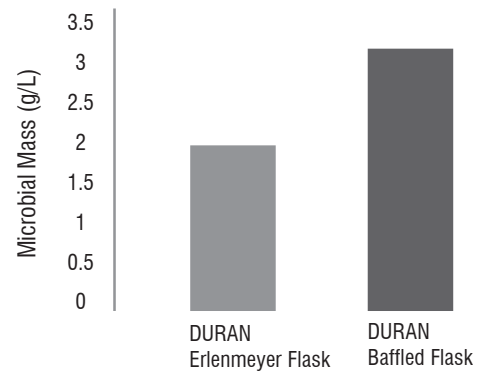
- Due to limited oxygen transfer, cell growth is restricted in standard Erlenmeyer flasks.
- Larger surface of the content results in a higher possible oxygen intake due to increased gas exchange area.
- Baffled flasks
  - interrupt the laminar flow to create a turbulent flow
  - increase the surface of the liquid and the gas exchange surface
  - produce a higher oxygen transfer compared to standard Erlenmeyer flasks

### Benefits of DURAN baffled flasks

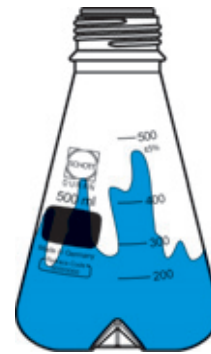
- completely automated machine manufacturing
  - reproducible geometry
  - comparable results
- complete with membrane screw cap (reproducible gas exchange)
- with retrace code (batch certificate via internet)



**Comparison of the produced microbial mass (Experiment with *E.Coli* bacteria)**



DURAN Erlenmeyer Flask



DURAN Baffled Flask

When cultivating microorganisms Erlenmeyer flasks on an orbital shaker, the oxygen intake is frequently the limiting factor for cell growth. The DURAN Erlenmeyer flask with four baffles on the bottom interrupts the laminar flow to create a turbulent flow. The surface of the liquid and the gas exchange surface is increased, so that the oxygen intake can be increased.

Cat No.	Description	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21283 365	DURAN baffled flask, GL 45 with bottom baffles, complete with membrane screw cap and pouring ring, PP	250	4	1907.00
21283 445	DURAN baffled flask, GL 45 with bottom baffles, complete with membrane screw cap and pouring ring, PP	500	4	1941.00



**NEW**

## **DURAN PURE**

**Perfect for the Pharmaceutical Industry  
Answer to Extensive Documentation**

### **Primary packaging including a wide range of services**

#### **Advantages**

- All necessary information about products and supplier is available for downloading
- The change service automatically informs you about changes and new items. No need for you to become active in acquiring up-to-date information
- Reliable and time-saving thanks to a complete one-stop service

#### **NEW PRODUCT LINE WITH SERVICE PLUS**

The DURAN Group is a DIN EN ISO 9001 certified company which has been going strong for many years in supplying the pharmaceutical industry with products for a wide range of applications be it in fundamental research, quality control and quality assurance laboratories or manufacturing processes. This has been proven by numerous successfully passed audits and our long term supply relationships.

The regulatory authorities governing the pharmaceutical industry require comprehensive documentation of the supplier's qualifications, specially those in relation to primary packaging within the pharmaceutical manufacturing process.

Extensive documentation of the new product line DURAN PURE provides comprehensive information to you in line with these regulations.

#### **Primary Packaging Solution DURAN PURE**

- contains the individual components DURAN PURE bottle with dust cover. DURAN PURE Premium Cap as well as the qualification package for each component
- is sealed with a dust cover during the manufacturing process which prevents possible transport-induced contamination of the inner surface of the glass bottles
- is compliant with current pharmacopoeias USP, Ph.Eur., and JP
- provides downloadable information relating to product and supplier qualifications for approval by relevant authorities
- informs about changes and renewals in accordance with Change Control
- does not require any extractables and leachables studies as DURAN PURE bottles are virtually inert
- contains no plasticizer



DURAN PURE bottle with DIN thread GL 45 and dust cover  
Cat. No. 81801 5403



Detailed view of dust cover



DURAN PURE Premium Cap GL 45  
Cat. No. 89108 8679



DURAN PURE Premium Cap GL 45  
STERICLIN packed  
Cat. No. 89299 2806



NEW

## DURAN PURE

Primary packaging solution DURAN PURE contains the individual components:

### DURAN PURE Bottle with DIN thread GL 45 and dust cover

- Batch certification
- Statement of conformity
- Dust cover is installed directly after tempering DURAN PURE bottles. At this stage, the inner surface of the bottle has the highest purity level. The dust cover preserves the purity and prevents contamination of the inner surface of the bottles.

### DURAN PURE Premium Cap from TpCh260TZ, GL 45

- Batch certification
- Statement of conformity
- Available in two versions: packed in PE bags or STERICLIN®-packed

The qualification package provides extensive documentation for product and supplier qualification. The documentation is available for downloading at [www.duran-group.com](http://www.duran-group.com).

### DURAN PURE PREMIUM CAP

The Premium Cap is optimally suited for use in the pharmaceutical industry. Two versions are available: packed in Polyethylene bags or STERICLIN®-packed. Without STERICLIN®-packaging the Premium Cap is suitable for dry heat sterilisation up to 260 °C.

### Premium Cap from TpCh260, STERICLIN®-packed

STERICLIN®-packaging is a sterile barrier system (SBS). Those paper / film see-through pouches are compliant in accordance to DIN ISO 11607.

The sterilisation proof paper is an effective barrier against germs and bacteria, yet it permits the transmission of air, steam, or sterilisation gases.

Premium Caps are sealed in the SBS under Class 7 clean room conditions. The clean room conditions are in accordance to EN ISO 14644-1. No pre-cleaning of the SBS sealed Premium Caps is therefore necessary. After sterilisation the Premium Cap can be stored STERICLIN®-packed up to 6 months without any loss of sterility.

### Supply:

STERICLIN®-packed Premium Caps are supplied “ready-for-sterilisation”. Sterilisation is carried out by you.

### Sterilisation:

Steam sterilisation is the recommended method with pre-vacuuming and temperatures from 121 °C to 134 °C for 20 minutes each. Three indicators for STEAM-, EO-, and FORM-sterilisation are imprinted on the pouches indicating completed sterilisation through a change in colors.

### DURAN PURE – Services for your product and supplier qualification

An integral part of the DURAN PURE line is the qualification package. Aside from comprehensive documentation we offer a wide range of services. The documentation is available for downloading at [www.duran-group.com](http://www.duran-group.com). Follow the icons.

Qualification Package DURAN PURE

- **Batch Certificate**  
with certificate of conformity and certificate of analysis.
- **Qualification Documentation**  
contains information for product and supplier qualification.
- **Individual Certificates**  
such as BSE/TSE, USP, and FDA conformity, certified for food applications, REACH, RoHs.
- **Change Service**  
comprises qualification documentation and individual certificates. You are automatically informed about changes with reference to products, new analyses, or test results.
- **Questionnaire Processing**  
for product and supplier qualifications please send the questionnaires directly to the Product Manager Pharmaceutical Industry using [pharma@duran-group.com](mailto:pharma@duran-group.com)
- **Audits**  
DURAN offers to conduct payable audits for DURAN PURE products. To schedule an audit, please enter your preferred audit date in the audit schedule

### Advantages

- No pre-cleaning necessary
- Sterilisation of STERICLIN packed Premium Caps
- Sterile storage in STERICLIN packaging up to 6 months

### Premium Cap Properties

- Size: GL 45 thread
- Material TpCh260 (similar to PFA)
- Outstanding temperature resistance from -196 °C to +260 °C
- High chemical resistance
- USP class VI conformity  
USP <87>, <88>  
ISO 10993-5
- FDA-compliant, PTFE-coated silicone seal  
FDA CFR 21§177.1550 for PTFE  
FDA GTR 21§177.2600 for elastomers
- No dye additive (leaching of dyes impossible)
- Retrace Code (traceability)

### Qualification Package

Documents for download



Supporting service features



**NEW**

## DURAN PURE

### Comparison of DURAN Laboratory glass bottle and DURAN PURE bottle

DURAN Laboratory Glass Bottle	DURAN PURE Bottle
Glass Type I (USP, Ph.Eur., JP conformity)	Glass Type I (USP, Ph.Eur., JP conformity)
	Dust cover
	<b>Qualification Package</b>
Standard specification	DURAN PURE specification
Standard batch certificate	Batch certificate with test certificate
	Qualification documentation
	Individual certificates
	Audits
	Change service, Questionnaire processing

### Comparison of Premium Cap and DURAN PURE Premium Cap

Premium Cap TpCh260TZ	DURAN PURE Premium Cap from TpCh260TZ
USP Class VI conformity	USP Class VI conformity
	Optionally with and without STERICLIN®-packaging
	<b>Qualification Package</b>
Standard specification	DURAN PURE specification
Standard batch certificate	Batch certificate with test certificate
	Qualification documentation
	Individual certificates
	Audits
	Change service, Questionnaire processing

### Advantages at a Glance

#### Comparison of Premium Cap and DURAN PURE Premium Cap

- Traceability using Retrace Code
- Suitable for dry heat sterilisation
- Includes comprehensive documentation and service
- Change service automatically informs about product related changes. No need to become active in acquiring up-to-date information

#### DURAN PURE Bottle with Dust Cover

USP, Ph.Eur. and JP conformity	• USP <660> • Ph.Eur. 3.2.1 • JP 7.01 Method 1
Glass type I is a neutral glass and virtually inert	
Conforms with DIN ISO 3585	
Transparency allows content and filling level control	

#### DURAN PURE Premium Cap

USP class VI conformity	• USP <87>, <88> • ISO 10993-5PTFE-sealed silicone seal is platinum cured and FDA-compliant
	• FDA CFR 21 §177.1550 for PTFE
	• FDA CFR §177.2600 for elastomers
No dye additives	
Outstanding temperature resistance from -196 °C to +260 °C	

**NEW**

## DURAN PURE

PERFECT FOR THE REQUIREMENTS OF THE PHARMACEUTICAL INDUSTRY

### Application Fields of DURAN PURE Bottles as Primary Packaging

According to pharmacopoeias, primary packaging is a “container, which comes into direct contact with preparations” and which must not undergo any chemical reaction with the content. Due to excellent chemical and physical properties DURAN PURE bottles can be used in pharmaceutical manufacturing processes for filling, storing and transporting excipients or additives such as enhancing substances (adjuvants).

The production of vaccines in particular places high requirements on primary packaging.

### Examples for Application Fields of DURAN PURE Bottles:

- As primary packaging for the production of enhancing substances
- For storing raw materials
- For filling and transporting formulated enhancing substances
- For sampling during vaccine production as part of quality assurance
- As primary packaging for buffer solutions

### Properties of DURAN PURE Bottles with Dust Cover

- Conform with DIN ISO 3585
- Class type according to USP <600>, <88> Ph.Eur: 3.2.1 JP 7.01 method I
- DURAN PURE bottles are virtually inert
- High temperature resistance
- Suitable for dry heat sterilization
- Transparency allows content and filling level control
- Traceability using Retrace Code
- Dust cover prevents contamination of inner surface of the bottle

Bottles, with DIN thread, Graduated, CLEAR, with Dust Cover without Cap, <b>DURAN PURE</b>						DIN ISO 3585
Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty Per Pallet Pcs.	Maximum Price Rs/Pc
81801 4407	500	45	86	181	360	377.00
81801 5403	1000	45	101	230	210	557.00
81801 6305	2000	45	136	267	120	962.00
81801 7301	5000	45	183	340	48	6131.00
81801 8606	10000	45	230	415	30	11019.00
81801 9105	20000	45	295	510	12	21938.00

Premium Caps Made of TpCh 260 TZ, Temperature Resistant from -196 °C to +260 °C, without colourants, USP/FDA conformity, **DURAN PURE**

Cat No.	DIN-thread GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc
89108 8679	45	5	917.00
89299 2806	45 - STERICLIN	20	1074.00

For the sake of Dust proofness, it is essential that orders be placed on Pallet Quantity basis only.

**NEW****CONTAINER / CLOSURE SYSTEM FOR PHARMACEUTICAL INDUSTRY**

Made of Borosilicate 3.3 Expansion USP Type 1 Glass, these vials are widely used world over for compatibility & stability studies in pharmaceutical industries.

Vials complete with PP Caps Blue, DURAN

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty Per Pack Pcs.	Maximum Price Rs/Pc
26990 04	5	18	22	40	100	172.00

**NMR Tubes**

NMR tubes are available according to requirement in three accuracy classes. The correct tube can be selected depending on magnetic field and spin. These tubes are noteworthy for their close tolerances and accuracy, especially to their straightness, wall thickness and distribution of wall thickness. Consequently quick and accurate test results are achievable.

Cat No.	Type	Height mm	O. D. mm	I. D. mm	Camber mm	MHZ	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23170 0117	Economic	178	4.95 ±0.050	4.20 ±0.050	0.070	300	250	214.00
23170 0211	Professional	178	4.97 ±0.025	4.20 ±0.025	0.030	400	250	898.00
23170 0314	Scientific	178	4.95 ±0.013	4.20 ±0.025	0.013	500	5	1672.00

**Spare Caps for NMR Tubes**

Cat No.	Colour	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29917 01	Blue	250	50.00
29917 02	Red	250	50.00
29917 03	Yellow	250	52.00
29917 04	Black	250	52.00
29917 05	Green	250	52.00

Orders will be accepted in Pack Quantities only for both NMR Tubes & Spare Caps for NMR Tubes

**SEPTA**

SEPTAS made from silicon are available in various sizes for sample tests in R & D laboratories and biotechnological research centres. These products are manufactured in accordance with the size and bonding material. Due to features like non permeability and low volatility the silicon SEPTAS are best suited for sealing applications. The quality of rubber used in latest moulding process is of excellent grade to obtain precise shape of SEPTAS.

Cat No.	Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77610 14	B 14	10	72.00
77610 19	B 19	10	88.00
77610 24	B 24	10	102.00
77610 29	B 29	10	114.00
77610 34	B 34	10	138.00



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## CONNECTION SYSTEMS FOR DURAN LABORATORY BOTTLES

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All systems facilitate the safe transfer of liquid media within an enclosed sterile system. Ideal for chemical and biotechnological laboratories.

The new connection system is based on screw caps with a GL 45 thread and two or three connection ports. Tube connections can be used to feed liquid media into or extract them from the bottle. A universal GL 14 tube adapter and various inserts permit the use of four different tube outer diameters. An additional membrane filter with 0.2  $\mu\text{m}$  pore size permits sterile pressure equalization at one of the ports.

The flexible modular system means that you can put together the various components individually depending on requirements and application. The components are mutually compatible and are used together with the original DURAN GL 45 laboratory bottles. **To increase safety in the laboratory, it is advisable to use the pressure-resistant DURAN pressure plus laboratory bottle.**

### Advantages

- The system is highly versatile in use, because the screw cap is based on the standardized GL 45 thread
- Four different tube outer diameters can be used – 1.6mm; 3.0mm; 3.2mm and 6mm.
- The components for the 2 and 3 port system are identical and interchangeable.
- Ports not in use can be sealed with a dummy cap.
- The caps and all individual components are made of PTFE and PP and can be completely autoclaved together with the bottle, so that they can be reused repeatedly. It is not necessary to take the system apart first.
- Working in the enclosed system retains toxic gases in the bottle. Similarly, the evaporation of expensive substances can also be reduced.

### Examples of Applications

- Use in Titration systems
- Use in Biotechnological processes, e.g. for pumping additives (culture media etc.) from storage containers into reaction containers.
- Use in automated closed processes for transferring pure, sterile media
- Transfer of harmful, toxic substances in the enclosed system to reduce out-gassing.
- HPLC Laboratory Bottle with Connection System can be used for feeding solvents to HPLC machines, disposal of waste media and also for sterile transfer of culture media under pressure e.g. fermenter.

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### Connection Systems - DURAN HPLC Bottle GL 45, 4 ports, 1000 ml Complete (incl. screw caps and seals)

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Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11298 20	HPLC Bottles Pressure plus, 1000ml <ul style="list-style-type: none"><li>• 1 x Screw Cap GL 45, 4 Ports</li><li>• 4 x Silicone Sealing Rings 1.6mm</li><li>• 4 x Silicone Sealing Rings 3.2mm</li><li>• 4 x Silicone Seals</li><li>• 4 x Screw Caps M8, for port</li></ul>	2	4676.00

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# DURAN CONNECTION SYSTEMS



Pressure Plus Bottle with  
2 Port Connection



Pressure Plus Bottle with  
3 Port Connection



Pressure Plus Bottle with  
4 Port Connection



Cat No.  
11601 76

Screw GL 80 PP - 4 Port GL 18



Screw GL 80 PP - 4 Port GL 18 and Components



Cat No.  
11297 50

Screw GL 45 PP - 2 Port GL 14



Screw GL 45 PP - 4 Port GL 14 and Components



DURAN®  
GLS 80  
VERSATILE  
GLASS  
BOTTLES







**Connection Systems - DURAN HPLC Bottle GL 45, 4 ports, 500 ml Complete (incl. screw caps and seals)**

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11298 21	HPLC Bottles Pressure plus, 500ml <ul style="list-style-type: none"> <li>• 1 x Screw Cap GL 45, 4 Ports</li> <li>• 4 x Silicone Sealing Rings 1.6mm</li> <li>• 4 x Silicone Sealing Rings 3.2mm</li> <li>• 4 x Silicone Seals</li> <li>• 4 x Screw Caps M8, for port</li> </ul>	2	4617.00

**Spare Parts for 1129820/1129821 Screw Cap HPLC**

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11298 12	GL 45, 4 ports complete comprising <ul style="list-style-type: none"> <li>• 1 x Screw Cap GL 45, 4 ports</li> <li>• 4 x Silicone Sealing Rings 1.6mm I.D.</li> <li>• 4 x Silicone Sealing Rings 3.2mm I.D.</li> <li>• 4 x Silicone Seals</li> <li>• 4 x Screw Caps M8, for port</li> </ul>	2	3918.00
11298 13	GL 45, 4 ports comprising <ul style="list-style-type: none"> <li>• 4 x Silicone Sealing Rings 1.6mm</li> <li>• 4 x Silicone Sealing Rings 3.2mm</li> <li>• 4 x Silicone Seals</li> <li>• 4 x Screw Caps M8, for port</li> </ul>	1	2241.00
11378 01	Pressure Equalization set for 4 port cap (0.2µm including membrane filter)	1	2351.00
11298 19	Spare Membrane PTFE GL 14 for sterile pressure compensation, 0.2µm	1	724.00
21810 54	Spare Bottle DURAN pressure plus GL 45, 1000ml	10	757.00
10922 35	Spare Bottle DURAN pressure plus GL 45, 500ml	10	699.00

**Connection Systems - If you want to fit two bottles with a three port connection system and if you want to work with two different tube diameters (1.6mm & 3mm) and pressure equalization, you will need the following individual components.**

Cat No.	Components	Qty. to be Ordered Pcs	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11297 51	Screw Cap GL 45 PP 3 Port GL14	1	2	2717.00
11298 14	Screw Cap GL 14 for hose connection	2	2	366.00
11298 15	Insert for Screw Cap GL 14 1.6mm	2	1	1217.00
11298 16	Insert for Screw Cap GL 14 3.0 mm	2	1	1217.00
11377 99	Pressure equalization set (complete) (size GL 45)	2	1	2351.00
11298 17	Insert for Screw Cap GL 14 3.2mm - optional	2	1	1217.00
11298 18	Insert for Screw Cap GL 14 6.0mm - optional	2	1	1217.00

**NEW**

## EXPANSION OF THE CONNECTION SYSTEMS FOR DURAN LABORATORY GLASS BOTTLES: GL 45 SCREW CAP WITH 2 HOSE CONNECTIONS



The new connection system with hose connections has been specially developed for the connection of soft elastic tubing, which, for example, is used in biotechnology when transferring media with the aid of peristaltic pumps.

The curved hose connections prevent kinking of the tubing. The grey PP core moves freely and allows the vessel to be changed without twisting of the firmly attached tubing.

### Properties/application:

- Safe, sterile transfer of liquid media within a closed system.
- Highly versatile because the screw cap is based on the standard GL 45 thread.
- Ideal for use with elastic, soft tubing ID 6 - 9 mm (Viton®, Tygon®, silicone)
- 2 PP hose connections, curved hose connections on the top side, straight connections on the lower side.
- Optional filter top part for sterile pressure equalisation available.
- Temperature resistant up to +140°C
- Autoclavable/dishwasher proof

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11297 55	GL 45 screw cap with 2 hose connectons	2	2469.00
11298 25	Filter top part for pressure equalization	2	2244.00



### Other Connection System Options

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11297 50	Screw Cap GL 45 PP 2 Port GL 14	2	2531.00
11562 92	Plastic Screw Cap Red, Closed, GL 14	2	170.00

### Pouring Ring, Blue, GLS 80

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11601 66	GLS 80	10	162.00

### Membrane Screw Cap, GLS 80, PP Blue

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11601 68	GLS 80	2	674.00

If you want to fit two DURAN GLS 80 bottles with a 4 port system and want to work with two different tube diameters (3.2mm and 10mm) and pressure equalisation with the redundant fourth port fitted with a screw cap, then you will need the following individual components

Cat No.	Components	Thread	Qty. to be Ordered Pcs	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11601 67	Pressure Compensation set for 4 Port Screw Cap	GL 18	2	2	2375.00
11601 69	Insert for Screw, 3.2mm	GL 18	2	1	1460.00
11601 72	Insert for Screw Cap, 10.0mm	GL 18	2	1	1460.00
11601 74	Screw Cap for Tube Connection, Blue	GL 18	2	2	601.00
11601 76	Screw Cap GLS 80 PP 4 Port GL 18	GLS 80	1	2	6217.00
11706 82	Screw Cap, Red	GL 18	1	2	266.00
<b>(Optional)</b>					
11601 70	Insert for Screw Cap, 6.0mm	GL 18	2	1	1460.00
11601 71	Insert for Screw Cap, 8.0mm	GL 18	2	1	1460.00
11601 73	Insert for Screw Cap, 12.0mm	GL 18	2	1	1460.00
11601 75	Screw Cap 4 Port + NS 29/32, GLS 80, PP	GLS 80	1	2	7771.00

## DG SAFETY CAPS

### Professional handling of aggressive liquids for optimum safety

Ideal for collecting and storing safely, liquid laboratory waste.

DG Safety Caps are high grade, flexible connection systems which have been designed specially for handling aggressive, gas-forming liquids. Available with 1, 2 or 3 connection ports with optional stopcocks, DG Safety Caps are particularly suitable for pharmaceutical and chemical applications.

Safety for Laboratory personnel enhanced with a choice of different connections and activated carbon filters

- Drip-free collection of used or contaminated media
- No slipped tubes
- No dangerous gas emissions
- No substance loss due to evaporation
- Clean working environment

The flexible DG Safety Cap Connection System for laboratory bottles allows aggressive liquids to be transferred safely and cleanly



## Advantages

- DG Safety Caps are fitted with free-rotating caps to enable container change without twisting the fixed tubes.
- The air valve with PTFE membrane filter (pore size 1 $\mu$ m) prevents gases escaping and at the same time enables pressure compensation.
- The highly chemically resistant PTFE material makes DG Safety Caps particularly suitable for aggressive solvents.
- Adapters are available for GL 40, GL 38 and GL 32 screw threads.

DG Safety Caps functionally support the chemical industry's **Responsible Care Initiative**.

**For HPLC applications we recommend the DURAN Pressure Plus Laboratory Bottle with TUV seal of approval. The bottle is specially designed to be pressure-resistant from -1 to +1.5 bar according to ISO 4796 and guarantees certified safety compliant with EN 1595.**

## DG Safety Caps

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11684 01	DG Safety Cap I (one port) GL 45, PBT, PTFE	1	19130.00
11684 02	DG Safety Cap II (two port) GL 45, PBT, PTFE	1	21099.00
11684 13	DG Safety Cap III (three port) GL 45, PBT, PTFE	1	22225.00
11684 14	DG Safety Cap I (one port) with stopcock, GL 45,PBT,PTFE	1	27570.00
11684 15	DG Safety Cap II (two port) with stopcock, GL 45,PBT,PTFE	1	30945.00
11684 16	DG Safety Cap III (three port) with stopcock, GL 45,PBT,PTFE	1	35166.00
11684 17	DG Safety Cap for NS29/32,PP,PTFE	1	21099.00
11684 18	DG Safety Waste Cap GL 45,PBT,PTFE	1	15472.00
11684 20	DG Safety Waste Cap GL 45,PBT,PTFE for leak hose	1	16880.00
11684 21	Ferrule, ID=1.6mm,PTFE	10	619.00
11684 22	Ferrule, ID=2.3mm,PTFE	10	619.00
11684 23	Ferrule, ID=3.2mm,PTFE	10	619.00
11684 24	Fitting with Ferrule, ID=1.6mm,PTFE	10	1575.00
11684 25	Fitting with Ferrule, ID=2.3mm,PTFE	10	1575.00
11684 26	Fitting with Ferrule, ID=3.2mm,PTFE	10	1575.00
11684 27	Fitting, PP (Spare Set)	12	491.00
11684 28	Screw plug UNF 0.25 inch PTFE	10	1097.00
11684 29	Plug NPT 1/8 inch. For leak hose, PTFE	1	3375.00
11684 30	Venting Valve for DG Safety Caps, PC	1	6188.00
11684 31	Filter for Venting Valve, 1 $\mu$ m, PTFE membrane	1	8158.00
11684 32	Charcoal Filter big, filling quantity 48g	1	25038.00
11684 43	Charcoal Filter big, filling quantity 24g	1	16598.00
11684 44	Threaded Adaptor GL 40/GL45 PTFE	1	10971.00
11684 45	Threaded Adaptor GL 40/GL45 PP	1	7876.00
11684 46	Threaded Adaptor GL 38 PTFE	1	10971.00
11684 47	Threaded Adaptor GL 38/GL45 PP	1	7876.00
11684 48	Threaded Adaptor GL 32/GL45 PTFE	1	10971.00
11684 49	Threaded Adaptor GL 32/GL45 PP	1	7876.00
11684 50	Tool for PTFE Fitting	1	2756.00
11684 51	Tool for PTFE Fitting (Square type)	1	2756.00
11706 82	Scre Cap, Red, GL18, made of PBT with protected seals (blind cap)	2	266.00
11713 95	Screw Cap (PBT) GL45 with 2 silicon seals (double sided PTFE coated) with aperture (11.5mm)	1	1204.00
11713 97	Silicon seal (double sided PTFE coated) with aperture (11.5mm)	5	1876.00

**NEW**

### DURAN® Super Duty Beakers and Erlenmeyer Flasks

Due to the increased quantity of glass, the mechanical sturdiness is significantly improved compared to standard DURAN® Beakers and Erlenmeyer flasks.

A further product advantage is the strengthened (cooled) rim, which also provides additional impact resistance and considerably reduces the risk of breakage.

This extension to DURAN® product range therefore offers the user optimum safety when working with the glassware that is subject to heavy mechanical loading, even when it is cleaned and used frequently. Super Duty vessels also work out cheaper in the long run - thanks to the increased impact resistance

#### Product Advantages

- Increased mechanical sturdiness due to increased uniform wall thickness
- Reinforced, sturdy rim

- Uniform wall thickness distribution
- Proven DURAN® properties
- Type 1 glass / neutral glass as per USP, EP and JP
- Autoclavable / sterilisable
- With Retrace Code (Batch Certificate via Internet)
- Easy-to-read scale
- Fired-on, extremely durable printing

#### Application Note

To avoid thermal stressing of the glass, uniform and slow heating of super duty products is recommended. When working at very high temperatures, or if rapid temperature changes are expected, standard DURAN® beakers and Erlenmeyer flasks should be used, as these are characterized by excellent thermal shock resistance. However, the mechanical sturdiness of these DURAN® standard products is limited compared with the super duty range.

#### Beaker, Super Duty, Low Form, with Spout, with Reinforced Rim, DURAN

Cat No.	Capacity ml	Diameter mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21107 29	150	60	80	10	585.00
21107 36	250	70	95	10	585.00
21107 41	400	80	110	10	780.00
21107 48	600	90	125	10	907.00
21107 54	1000	105	145	10	1437.00
21107 63	2000	132	185	10	2513.00
21107 73	5000	170	270	1	14019.00



#### Erlenmeyer Flask, Super Duty, Narrow Neck, with Reinforced Rim, DURAN

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21217 14	25	42	22	75	10	984.00
21217 17	50	51	22	90	10	996.00
21217 24	100	64	22	105	10	904.00
21217 36	250	85	34	145	10	685.00
21217 44	500	105	34	180	10	948.00
21217 54	1000	131	42	220	10	1503.00
21217 63	2000	166	50	280	10	2785.00
21217 73	5000	220	52	365	1	13356.00



#### Erlenmeyer Flask, Super Duty, Wide Neck, with Reinforced Rim, DURAN

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21227 24	100	64	34	105	10	904.00
21227 36	250	85	50	140	10	685.00
21227 44	500	105	50	175	10	949.00
21227 54	1000	131	50	220	10	1503.00



**NEW**

**GI 45 Stirred Reactor**

- Drive using standard magnetic stirrers
- Variable stirrer shaft, can be used for 500 ml and 1,000 ml DURAN® GL 45 laboratory bottles
- Can be used up to 500 rpm
- Compatible with the proven DURAN® connection systems; hoses with bores from 1.6 mm to 6.0 mm can be fitted
- Significantly improved through mixing compared to standard magnetic stirring bar
- Materials used PP / PTFE / PEEK / stainless steel
- Parts in contact with media conform fully to FDA requirements
- Supply includes bottle (optional)

**A**  
121 °C

**Tmax**  
140 °C

**Application:**

The above mentioned properties make the DURAN® stirred reactor ideal for the widest possible range of mixing processes in laboratories, e.g. mixing liquids or dissolving solids. The connections available permits to introduce other media into the bottle or remove media during mixing.

The whole assembly is autoclaveable, so that it can be used in biological applications, for simple fermentation processes, for example. With the aid of components from the **DURAN® connection system** extra media bottles can be connected or sterile pressure compensation is possible



Cat No.	Description	Thread GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc
12003 95	GL 45 stirred reactor, incl. 500 ml DURAN® GL 45 bottle, folding magnetic stirrer and GL 45 PP cap with 2 x GL 14 ports, 2 x GL 14 PBT caps red	45	1	21064.00
12003 96	GL 45 stirred reactor, incl. 1000 ml DURAN® GL 45 bottle, folding magnetic stirrer and GL 45 PP cap with 2 x GL 14 ports, 2 x GL 14 PBT caps red	45	1	21769.00
12003 91	Folding magnetic stirrer for GL 45 stirred reactor, incl. shaft	45	1	19585.00
12003 90	Spare screw cap 2-ports for GL 45 stirred reactor (excl. stirrer) with GL 14 screw cap (PP, blue)	45	1	6271.00

**GI 80 Stirred Reactor**

materials used: PP / PTFE / PEEK / stainless steel

The GLS 80 stirred reactor is suitable for a wide range of laboratory mixing processes. The connections provided permit addition or removal of media from the bottle during the mixing process. The whole assembly can be autoclaved and is therefore suitable for use in the biological sector. By using components from the GLS 80 connection system, an additional media bottle (OD hose: 1.6 - 12.0 mm) can be connected or a sterile pressure equalizer attached. Drive for the stirrer is provided by a standard commercial magnetic

**A**  
121 °C

**Tmax**  
140 °C

stirrer. The variable agitator shaft can be used in DURAN® GLS 80 laboratory glass bottles (1 000 and 2 000 ml) and provides notably improved mixing in comparison with standard magnetic stir bars.

The agitating element is exchangeable and used up to 500 rpm is possible. Typical applications: mixing of liquids, dissolving of solids, simple fermentation processes



Cat No.	Description	Thread GLS	danchor stirrer mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
12003 79	stirred reactor cap, stirrer anchor type, magnetic, complete with shaft, connection and screw cap	80	62	1	25221.00
12003 80	stirred reactor anchor type, magnetic, complete with GLS 80 bottle 1000 ml GL 14 screw cap (PP, blue), 2 x GL14 screw cap (PBT red), 2 x GL18 screw cap (PBT red)	80	62	1	26771.00
12003 81	stirred reactor anchor type, magnetic, complete with GLS 80 bottle 2000 ml GL 14 screw cap (PP, blue), 2 x GL14 screw cap (PBT red), 2 x GL18 screw cap (PBT red)	80	62	1	27475.00

**Accessories for GLS 80 stirred reactor**

Cat No.	Description	dia anchor stirrer mm	dia impeller stirrer mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
12003 82	Stirrer impeller type, magnetic, for GLS 80 stirred reactor		62	1	15358.00
12003 83	Stirrer anchor type, magnetic, for GLS 80 stirred reactor	62		1	15358.00
12003 85	Spare screw cap for GLS 80 stirred reactor, PP blue/grey			1	7679.00
12003 86	Spare shaft for GLS 80 stirred reactor, stainless steel, incl. PEEK connection			1	4791.00



### DURAN® Production Bottles 10 and 20 litres

- Ideal for mixing and Stirring processes with large and heavy magnetic stir bars.
- Type 1 glass / neutral glass as per USP, EP and JP
- Marked increase in mechanical stability
- Uniform wall thickness
- Depyrogenisable
- Individual scaling and labelling possible
- Retrace Code
- Also available with scratch and breakage protection
- No BSE / TSE endangering substances contained
- With standard (GL 45) or wide neck (GLS 80) thread

#### Production Bottle, Narrow Neck, GL 45, Clear, Increased Wall Thickness, without cap and ring, DURAN

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11602 00	10000	1	22109.00
11601 00	20000	1	50371.00

#### Production Bottle, Wide Neck, GLS 80, Clear, Increased Wall Thickness, without cap and ring, DURAN

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11602 20	10000	1	26794.00
11601 10	20000	1	56008.00

#### Screw Cap, GLS 80 PSU with PTFE Silicone Seal, DURAN

Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11658 88	1	1963.00

#### Pure PTFE Pouring Ring, GLS 80, DURAN

Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11673 07	1	1198.00




**Bottles, Culture, Roux-Type, Conical Neck, Eccentric, DURAN**

Cat No.	Capacity ml	Breadth mm	Depth mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21571 58	1200	132	56	275	10	4360.00


**Bottles, Wash, LDPE Plastic, RIVIERA**

Bottles & delivery tubes made of chemically resistant low density polyethylene, flexible with screw cap.

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74200 36	250	10	56.00
74200 44	500	10	69.00


**Burettes, Straight Bore Stopcock, Accuracy as per Class 'A' of I. S. 1997 : 1982, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70301 60	10	0.05	0.02	530	5	1473.00
70301 70	25	0.10	0.05	530	5	1518.00
70301 75	50	0.10	0.05	780	5	1723.00
70301 80	100	0.10	0.10	830	5	2490.00


**Burettes, Rotaflow Needle Valve Stopcock, Accuracy as per Class 'A' of I. S. 1997 : 1982, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70401 60	10	0.05	0.02	530	5	1368.00
70401 70	25	0.10	0.05	530	5	1412.00
70401 75	50	0.10	0.05	780	5	1601.00
70401 80	100	0.10	0.10	830	5	2256.00


**Burettes, Schellbach, Main Point Ring Graduation, Straight Stopcock with Glaskey, Blue Graduation, Class 'AS', Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand**
**DIN 12700**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
31401 60	10	0.02	0.02	2	3617.00
31401 70	25	0.05	0.03	2	3617.00
31401 75	50	0.10	0.05	2	3617.00





**Burettes Straight Bore Stopcock, Accuracy as per Class 'B' of I. S. 1997 : 1982,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70300 60	10	0.05	0.05	530	5	536.00
70300 70	25	0.10	0.10	530	5	524.00
70300 75	50	0.10	0.10	780	5	573.00
70300 80	100	0.10	0.20	830	5	797.00



**Burettes, Rotaflow Needle Valve Stopcock, Accuracy as per Class 'B' of I. S. 1997 : 1982,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70400 60	10	0.05	0.05	530	5	470.00
70400 70	25	0.10	0.10	530	5	437.00
70400 75	50	0.10	0.10	780	5	481.00
70400 80	100	0.10	0.20	830	5	714.00



**Burettes, Schellbach, Main Point Ring Graduation, Straight Valve Stopcock with PTFE Spindle, Blue Graduation, Class 'AS', Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand** DIN 12700

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
31402 60	10	0.02	0.02	2	3834.00
31402 70	25	0.05	0.03	2	3834.00
31402 75	50	0.10	0.05	2	3834.00



**Burettes, Automatic, Straight Bore Stopcock with Glasskey, White Graduation, Accuracy as per Class 'A' of IS 1997 : 1982, with Individual Certificate of Performance, Complete with Reservoir, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70312 60	10	1	5268.00
70312 70	25	1	5101.00
70312 75	50	1	5712.00
70312 80	100	1	6490.00



**Burettes, Automatic, Rotaflow Stopcock, White Graduation, Accuracy as per Class 'A' of IS 1997 : 1982, with Individual Certificate of Performance, Complete with Reservoir, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70412 60	10	1	5090.00
70412 70	25	1	4957.00
70412 75	50	1	5501.00
70412 80	100	1	6257.00





**Burettes, Automatic, Mounted on Reservoir, Schellbach, Main Point Ring Graduation, Straight Stopcock with Glasskey, Blue Graduation, Class 'AS', Conformity Certified with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Made from EM-TECHCOLOR Brand**  
Batch Certificate shall be for Burette only (Cat. No. 31401..)

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
314001 60	10	1	6095.00
314001 70	25	1	6853.00
314001 75	50	1	6853.00

\* Reservoir Capacity : 500 ml for 10 ml and 2000 ml for 25 & 50 ml size.



**Burette, Automatic, Mounted on Reservoir, Schellbach, Main Point Ring Graduation, Straight Valve Stopcock with PTFE Spindle, Blue Graduation, Class 'AS', Conformity Certified with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Made from EM-TECHCOLOR Brand**  
Batch Certificate shall be for Burette only (Cat. No. 31402..)

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
314002 60	10	1	6305.00
314002 70	25	1	7064.00
314002 75	50	1	7064.00

\* Reservoir Capacity : 500 ml for 10 ml and 2000 ml for 25 & 50 ml size.



**Burettes, Automatic, Straight Bore Stopcock with Glasskey, White Graduation, Accuracy as per Class 'B' Complete with Reservoir, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70311 60	10	1	3379.00
70311 70	25	1	3323.00
70311 75	50	1	3601.00

\* Reservoir Capacity : 500 ml for 10 ml and 2000 ml for 25 & 50 ml size.



**Burettes, Automatic Zero, Rotaflow Stopcock, White Graduation, Accuracy as per Class 'B' Complete with Reservoir, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70411 60	10	1	3290.00
70411 70	25	1	3201.00
70411 75	50	1	3518.00

\* Reservoir Capacity : 500 ml for 10 ml and 2000 ml for 25 & 50 ml size.



**Reservoir for Automatic Burette, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
2180 144	500	B 29	1	582.00
2180 163	2000	B 34	1	1343.00
2180 173	5000	B 34	1	5866.00

**Condensers, Liebig, with Sealed Inner Tube,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	App. Overall Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70800 20	200	345	1	251.00
70800 30	300	445	1	274.00
70800 40	400	545	1	332.00



**Condensers, Liebig, Drip Tip with I/C Inner and Outer Joint,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	App. Overall Height mm	Joint Size Inner	Joint Size Outer	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70810 20	200	350	B 19	B 19	1	297.00
70810 30	300	450	B 24	B 24	1	361.00
70810 40	400	550	B 24	B 24	1	408.00



**Condensers, Allihn, Drip Tip with I/C Inner and Outer Joint,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	App. Overall Height mm	Joint Size Inner	Joint Size Outer	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70811 20	200	350	B 19	B 19	1	379.00
70811 30	300	450	B 24	B 24	1	574.00
70811 40	400	550	B 24	B 24	1	649.00



**Condensers, Graham, Coil Distillate type, Drip Tip with I/C Inner and Outer Joint,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	App. Overall Height mm	Joint Size Inner	Joint Size Outer	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70812 30	300	450	B 24	B 24	1	791.00
70812 40	400	550	B 24	B 24	1	880.00
70812 50	500	650	B 24	B 24	1	988.00



**Condensers, Double Surface, Davies,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	Socket Joint	Cone Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70813 159	150	19/26	19/26	1	684.00
70813 219	200	19/26	19/26	1	1125.00
70813 319	300	19/26	19/26	1	1425.00
70813 324	300	24/29	24/29	1	1561.00
70813 329	300	29/32	29/32	1	1738.00





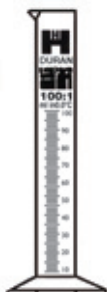
**Cylinders, Colour Comparison, Nessler, Flat Bottom, Graduated, Accuracy as per Class 'B' of I. S. 4161 : 1967, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Approximate O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70600 75	50	26 x 150	10	140.00
70600 80	100	34 x 180	10	208.00



**Cylinders, Measuring, Class 'B', Blue Graduation, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70700 60	10	0.2	0.200	2	224.00
70700 70	25	0.5	0.500	2	267.00
70700 75	50	1.0	0.500	2	294.00
70700 80	100	1.0	1.000	2	337.00
70700 86	250	2.0	2.000	2	617.00
70700 90	500	5.0	5.000	2	811.00
70700 93	1000	10.0	10.000	1	1230.00



**Cylinders, Measuring, with Hexagonal Base and Short Line Graduation, Blue Graduation, Class 'B', EM-TECHCOLOR Brand**

**DIN 12680 T1**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22301 60	10	0.2	0.150	2	289.00
22301 70	25	0.5	0.375	2	304.00
22301 75	50	1.0	0.750	2	334.00
22301 80	100	1.0	0.750	2	383.00
22301 86	250	2.0	1.500	2	699.00
22301 90	500	5.0	3.750	2	917.00
22301 93	1000	10.0	7.500	1	1497.00
22301 94	2000	20.0	15.000	1	2957.00



**Cylinders, Measuring, with Hexagonal Base and Main Point Ring Graduation, Blue Graduation, Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Class 'A', EM-TECHCOLOR Brand**

**DIN 12680 T2**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22401 60	10	0.2	0.100	2	462.00
22401 70	25	0.5	0.250	2	541.00
22401 75	50	1.0	0.500	2	644.00
22401 80	100	1.0	0.500	2	729.00
22401 86	250	2.0	1.000	2	1106.00
22401 90	500	5.0	2.500	2	1513.00
22401 93	1000	10.0	5.000	1	1865.00
22401 94	2000	20.0	10.000	1	3596.00



**Cylinders, Measuring, with Hexagonal Base and Main Point Ring Graduation, Schellbach, Blue Graduation, Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Class 'A', EM-TECHCOLOR Brand** DIN 12680 T2



Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22201 60	10	0.2	0.100	2	782.00
22201 70	25	0.5	0.250	2	795.00
22201 75	50	1.0	0.500	2	815.00
22201 80	100	1.0	0.500	2	858.00
22201 86	250	2.0	1.000	2	1884.00
22201 90	500	5.0	2.500	2	1985.00
22201 93	1000	10.0	5.000	1	2810.00
22201 94	2000	20.0	10.000	1	7021.00

**Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'B', Blue Graduation, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70701 60	10	B 10	2	332.00
70701 70	25	B 14	2	370.00
70701 75	50	B 14	2	415.00
70701 80	100	B 19	2	512.00
70701 86	250	B 24	2	867.00
70701 90	500	B 34	2	1213.00
70701 93	1000	B 34	1	1755.00

**Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'B', Made from EM-TECHCOLOR Brand**



Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
223000 60	10	B 10	2	476.00
223010 70	25	B 14	2	526.00
223010 75	50	B 14	2	573.00
223020 80	100	B 19	2	629.00
223030 86	250	B 24	2	1066.00
223050 90	500	B 34	2	1413.00
223050 93	1000	B 34	1	2154.00
223050 94	2000	B 34	1	3421.00

**Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'A', Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Made from EM-TECHCOLOR Brand**

Batch certificate shall be for Measuring Cylinder Class 'A' only (Cat. No. 22401..)



Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
224000 60	10	B 10	2	783.00
224010 70	25	B 14	2	877.00
224010 75	50	B 14	2	1057.00
224020 80	100	B 19	2	1213.00
224030 86	250	B 24	2	1724.00
224050 90	500	B 34	2	2232.00
224050 93	1000	B 34	1	2777.00
224050 94	2000	B 34	1	4437.00


**Desiccators, Plain, Clear Glass, RIVIERA**

Cat No.	Max. I. D. mm	Overall Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74300 46	120	180	1	2778.00
74300 57	160	230	1	2994.00
74300 61	210	300	1	3416.00
74300 66	240	340	1	4476.00
74300 69	300	420	1	5474.00


**Desiccators, with Plane Flanges, without Junction, with Knobbed Lid, DURAN**

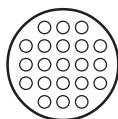
Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24781 46	100	187	1	7501.00
24781 57	150	252	1	8045.00
24781 61	200	309	1	9457.00
24781 66	250	357	1	12175.00
24781 69	300	433	1	13263.00


**Desiccators, Vacuum, Clear Glass, RIVIERA**

Cat No.	Max. I. D. mm	Overall Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74310 46	120	227	1	4632.00
74310 57	160	285	1	5554.00
74310 61	210	347	1	5778.00
74310 66	240	381	1	8111.00
74310 69	300	467	1	12407.00


**Desiccators, Vacuum, with Flat Flanges and NOVUS NS Junction, Outlet in Lid, with Stopcock, DURAN DIN 12491**

Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24782 46	100	174	1	11501.00
24782 57	150	239	1	14580.00
24782 61	200	296	1	15188.00
24782 66	250	344	1	24057.00
24782 69	300	420	1	31437.00


**Porcelain Plates for All Desiccators, RIVIERA**

Cat No.	DN	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74320 46	100	1	122.00
74320 57	150	1	170.00
74320 61	200	1	243.00
74320 66	240	1	292.00
74320 69	300	1	456.00

**Base for Plane and Vacuum Desiccator, DURAN** **DIN 12491**

Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24770 46	100	58	1	4239.00
24770 57	150	81	1	4892.00
24770 61	200	115	1	8045.00
24770 66	250	120	1	8371.00
24770 69	300	150	1	10871.00



**Lid for Plane Desiccator, DURAN**

Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24410 46	100	75	1	4239.00
24410 57	150	98	1	5762.00
24410 61	200	107	1	5978.00
24410 66	250	122	1	6413.00
24410 69	300	150	1	7392.00



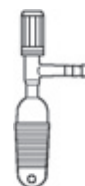
**Lid for Vacuum Desiccator, DURAN** **DIN 12491**

Cat No.	DN	Joint Size	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24420 46	100	B 24	62	1	5327.00
24420 57	150	B 24	85	1	7610.00
24420 61	200	B 24	94	1	7827.00
24420 66	250	B 24	109	1	12501.00
24420 69	300	B 24	137	1	19458.00



**Stopcock with PTFE Spindle for Vacuum Desiccator**

Cat No.	Joint Size	Length mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24799 04	B 24	124	1	3392.00



**Dishes, Crystallizing, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71600 44	300	95 x 55	6	336.00
71600 54	900	140 x 75	4	581.00
71600 59	2000	190 x 90	1	975.00



**Dishes, Crystallizing, with Spout, DURAN** **DIN 12338**

Cat No.	Capacity ml	O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21311 44	300	95 x 55	10	371.00
21311 54	900	140 x 75	10	638.00
21311 59	2000	190 x 90	10	1069.00




**Dishes, Evaporating, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Max. O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71700 41	90	90 x 45	10	390.00
71700 44	170	120 x 60	2	571.00
71700 54	600	150 x 75	2	940.00


**Dishes, Evaporating, with Spout, DURAN**
**DIN 12336**

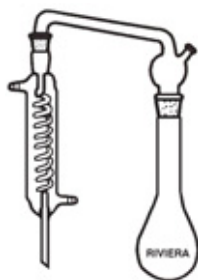
Cat No.	Capacity ml	Max. O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21301 41	90	80 x 45	10	492.00
21301 44	170	95 x 55	10	711.00
21301 54	600	140 x 80	10	1154.00


**Dishes, Petri, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71500 40	60 x 20	10	107.00
71500 42	80 x 20	10	118.00
71500 48	100 x 20	10	122.00
71500 52	150 x 25	10	305.00
71500 59	200 x 30	10	638.00


**Dishes, Petri, Unlimited Autoclavable, Bottom Dish and Lid Inside and Outside absolutely Flat, Free of Bubbles and other Imperfections, STERIPLAN**

Cat No.	O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23755 40	60 x 15	10	119.00
23755 42	80 x 15	10	132.00
23755 48	100 x 20	10	135.00
23755 52	150 x 25	10	339.00
23755 59	200 x 30	10	708.00


**Distilling Apparatus, with Graham Condenser, Interchangeable Joints, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

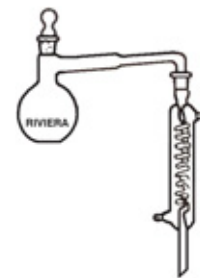
Used for determination of Nitrogen in organic compounds. In this assembly digestion & distillation stages can both be performed. Flask supplied with 24/29 and condenser supplied with 19/26 outer I/C joints.

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73300 05	500	1	2240.00



**Distilling Apparatus, with Graham Condenser, Interchangeable Joints and Interchangeable Stopper, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

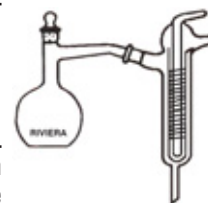
Used for batch production of distilled water of high purity and other general purpose batch distillation with the facility for addition from the I/C stoppered neck on the flat bottom flask.



Cat No.	Capacity ml	Condenser Jacket Length mm	I/C Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73400 05	500	200	19/26	1	2240.00

**Distilling Apparatus, with Friedrichs Condenser, Interchangeable Joints and Interchangeable Stopper, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Used for batch production of distilled water of high purity and other general purpose batch distillation for increased distillation rates with the facility for addition from the I/C stoppered neck on the flat bottom flask.



Cat No.	Capacity ml	Condenser Jacket Length mm	I/C Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73500 20	2000	350	24/29	1	2775.00

**Distilling Apparatus, with Friedrichs Condenser and Interchangeable Joint, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Incorporates a special Friedrichs condenser with a vapour tube rising to the top.



Cat No.	Capacity ml	Condenser Jacket Length mm	I/C Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73600 10	1000	495	34/35	1	2660.00

**Distilling Apparatus, Dean and Stark, for Moisture Testing as per I.P. specifications, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Apparatus consists of 10 ml receiver with graduation & 19/26 outer joint with 24/29 inner joint, round bottom flask 1000 ml with 24/29 centre joint and Liebig Condenser of 200 ml jacket length with 19/26 joint.



Cat No.	Capacity of Receiver ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73700 10	10	1	1845.00

**Extraction Apparatus, Soxhlet, Complete with Allihn Condenser, with Interchangeable Joint, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Capacity Flask ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73000 15	60	150	1	1390.00
73000 25	100	250	1	1781.00
73000 50	200	500	1	2273.00



**Condensers, Allihn, only for Extraction Apparatus (Cat No. 73000) Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	I/C Joint Bottom	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73020 15	34/35	1	560.00
73020 25	40/38	1	648.00
73020 50	50/42	1	818.00





**Extractors only, Soxhlet. with Interchangeable Joint,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Extractors are provided with a bulb to aid in siphoning action by means of a siphon tube near the top which is protected from accidental damage by a vapour tube.

Cat No.	Capacity ml	I/C Joint Top	I/C Joint Bottom	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73010 15	60	34/35	24/29	1	737.00
73010 25	100	40/38	24/29	1	1014.00
73010 50	200	50/42	24/29	1	1284.00

**FB Flask only for Extraction Apparatus,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73030 150	150	1	115.00
73030 250	250	1	124.00
73030 500	500	1	182.00



**Flasks, Erlenmeyer, Conical, Narrow Mouth, with Graduation  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71400 10	10	34	15	60	10	58.00
71400 14	25	42	21	70	10	63.00
71400 17	50	51	21	82	10	63.00
71400 24	100	64	22	105	10	63.00
71400 29	150	74	28	118	10	83.00
71400 36	250	85	34	140	10	99.00
71400 44	500	105	34	175	10	138.00
71400 54	1000	131	42	220	10	237.00
71400 63	2000	166	50	280	4	409.00
71400 68	3000	187	50	310	1	1151.00
71400 73	5000	220	50	365	1	1883.00



**Flasks, Erlenmeyer, Conical, Narrow Mouth, with Graduation, DURAN** DIN 12380, ISO 1773

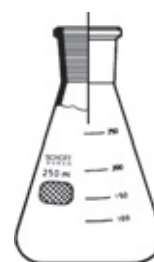
Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21216 14	25	42	22	75	10	128.00
21216 17	50	51	22	90	10	124.00
21216 24	100	64	22	105	10	73.00
21990 27	150	74	28	118	10	97.00
21216 36	250	85	34	145	10	115.00
21216 44	500	105	34	180	10	158.00
21216 54	1000	131	42	220	10	273.00
21216 63	2000	166	50	280	10	474.00
21216 68	3000	187	51	310	2	1324.00
21216 73	5000	220	51	365	1	2163.00

**Flasks, Erlenmeyer, Conical with PP Screw Cap, Autoclavable up to 140°C, Made from DURAN**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21803 365	250	10	304.00
21803 445	500	10	371.00
21803 545	1000	10	711.00


**Flasks, Erlenmeyer, Conical with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
208010 14	25	B 14	10	202.00
208020 14	25	B 19	10	202.00
208030 14	25	B 24	10	202.00
208010 17	50	B 14	10	200.00
208020 17	50	B 19	10	200.00
208030 17	50	B 24	10	200.00
208010 24	100	B 14	10	190.00
208020 24	100	B 19	10	190.00
208030 24	100	B 24	10	190.00
208040 24	100	B 29	10	202.00
208020 36	250	B 19	10	249.00
208030 36	250	B 24	10	249.00
208040 36	250	B 29	10	257.00
208050 36	250	B 34	10	324.00
208020 44	500	B 19	4	351.00
208030 44	500	B 24	4	351.00
208040 44	500	B 29	4	351.00
208050 44	500	B 34	4	378.00
208030 54	1000	B 24	2	526.00
208040 54	1000	B 29	2	526.00
208050 54	1000	B 34	2	526.00
208030 63	2000	B 24	2	860.00
208040 63	2000	B 29	2	860.00
208050 63	2000	B 34	2	860.00



Available in RIVIERA Brand — Prices on Request

**Flasks, Erlenmeyer, Conical with I/C Joint and Glass Stopper, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
209010 14	25	B 14	10	275.00
209020 14	25	B 19	10	275.00
209030 14	25	B 24	10	275.00
209010 17	50	B 14	10	270.00
209020 17	50	B 19	10	270.00
209030 17	50	B 24	10	270.00
209020 24	100	B 19	10	306.00
209030 24	100	B 24	10	306.00
209030 36	250	B 24	10	333.00
209040 36	250	B 29	10	345.00
209030 44	500	B 24	4	460.00
209040 44	500	B 29	4	460.00
209030 54	1000	B 24	2	631.00
209040 54	1000	B 29	2	631.00
209030 63	2000	B 24	2	1042.00
209040 63	2000	B 29	2	1042.00
209050 63	2000	B 34	2	1053.00



Available in RIVIERA Brand — Prices on Request



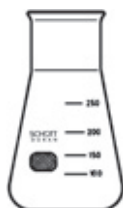
**Flasks, Iodine Determination with Glass Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74400 24	100	B 24	10	163.00
74400 36	250	B 24	10	205.00
74400 44	500	B 24	10	277.00
74400 54	1000	B 24	10	456.00



**Flasks, Erlenmeyer, Conical, Wide Mouth,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71410 24	100	64	34	110	24	73.00
71410 36	250	85	50	140	6	105.00
71410 44	500	105	50	175	6	168.00
71410 54	1000	131	50	200	6	295.00



**Flasks, Erlenmeyer, Conical, Wide Mouth,  
with Graduation, DURAN** DIN 12385

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21226 14	25	43	31	70	10	167.00
21226 17	50	51	34	85	10	163.00
21226 24	100	64	34	105	10	115.00
21226 36	250	85	50	140	10	179.00
21226 44	500	105	50	175	10	279.00
21226 54	1000	131	50	220	10	471.00
21226 63	2000	153	72	276	10	811.00



**Flasks, Flat Bottom, Narrow Neck,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73900 14	25	42	20	90	10	67.00
73900 17	50	51	26	90	10	73.00
73900 24	100	64	26	105	10	83.00
73900 29	150	75	28	132	10	94.00
73900 36	250	85	34	140	10	94.00
73900 44	500	105	34	170	10	153.00
73900 54	1000	131	42	200	10	216.00
73900 64	2000	166	50	250	6	420.00
73900 68	3000	195	50	295	1	1215.00
73900 73	5000	230	56	320	1	1957.00
73900 86	10000	279	65	400	1	4100.00



**Flasks, Flat Bottom, Narrow Neck, with Beaded Rim, DURAN** DIN 12347, ISO 1773



Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21711 36	250	85	35	140	10	131.00
21711 44	500	105	34	171	10	199.00
21711 54	1000	131	42	200	10	281.00
21711 64	2000	166	42	250	10	612.00
21711 68	3000	185	50	250	1	1660.00
21711 73	5000	223	50	290	1	2673.00

**Flasks, Pear Shape, Suitable for Rotary Evaporators with Ground Socket 29/32, DURAN**



Cat No.	Capacity ml	Max Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24120 37	250	81	140	10	2191.00
24120 46	500	101	170	10	2446.00
24120 56	1000	126	210	10	3175.00

**Flasks, Round Bottom, Narrow Neck, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74000 14	25	42	20	90	10	67.00
74000 17	50	51	26	95	10	73.00
74000 24	100	64	26	110	10	83.00
74000 29	150	75	28	137	10	94.00
74000 36	250	85	34	145	10	94.00
74000 44	500	105	34	175	10	153.00
74000 54	1000	131	42	210	10	216.00
74000 64	2000	166	50	260	6	414.00
74000 68	3000	195	50	305	1	1173.00
74000 73	5000	230	56	345	1	1894.00
74000 86	10000	279	70	420	1	4094.00
74000 91	20000	345	75	515	1	7424.00



**Flasks, Round Bottom, Narrow Neck, with Beaded Rim, DURAN** **DIN 12347, ISO 1773**  
 Flasks with Capacity 10000 ml and over have a Reinforced Rim

Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21721 36	250	85	34	144	10	109.00
21721 44	500	105	34	175	10	176.00
21721 54	1000	131	42	200	10	249.00
21721 64	2000	166	42	260	10	729.00
21721 68	3000	185	50	260	1	1479.00
21721 73	5000	223	50	305	1	2379.00
21721 86	10000	279	65	420	1	5142.00
21721 91	20000	345	76	515	1	9320.00



**Flasks, Filtering, Conical Shape, with Glass Hose Connection suitable for Vacuum use, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72100 24	100	72	24	105	10	243.00
72100 36	250	87	35	145	10	333.00
72100 44	500	107	35	175	10	412.00
72100 54	1000	138	43	230	10	624.00
72100 63	2000	168	43	275	4	1252.00



**Flasks, Filtering, Conical Shape, with Glass Hose Connection suitable for Vacuum use, DURAN** **ISO 6556**

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21201 24	100	65	24	100	10	1257.00
21201 36	250	85	35	155	10	1406.00
21201 44	500	105	34	185	10	1567.00
21201 54	1000	135	45	230	10	2186.00
21201 63	2000	166	60	255	1	2875.00



**Flasks, Filtering, Bottle Shape, with Glass Hose Connection suitable for Vacuum use, DURAN** **ISO 6556**

Cat No.	Capacity ml	Dia Base mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21191 68	3000	170	60	295	1	7624.00
21191 73	5000	185	70	360	1	11731.00
21191 86	10000	240	70	420	1	17477.00
21191 91	20000	290	75	535	1	30495.00

**Flasks, Distilling with Side Arm,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA  
Flasks of capacity 250 ml onwards made from DURAN**

Cat No.	Capacity ml	Approximate O. D. x Height mm	Approximate Neck O. D. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22253 24	100	64 x 210	22	5	211.00
22253 25	125	68 x 214	19	5	230.00
22253 36	250	88 x 226	24	2	289.00
22253 44	500	110 x 250	28	2	375.00
22253 54	1000	130 x 305	30	1	474.00
22253 64	2000	170 x 318	40	1	791.00



**Flasks, Kjeldahl, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74500 44	500	100	29	340	6	475.00
74500 51	800	118	34	365	6	581.00



**Flasks, Kjeldahl, with I/C Joint, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74501 44	500	B 24	6	595.00
74501 51	800	B 24	6	658.00



**Flasks, Kjeldahl, DURAN**

**DIN 12360**

Cat No.	Capacity ml	Max. Dia mm	Neck Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21231 44	500	101	34	300	10	845.00
21231 51	750	115	34	340	10	1049.00



**Flasks, Kjeldahl, with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
217030 44	500	B 24	10	1035.00
217030 51	750	B 24	10	1237.00





**Flasks, Volumetric, with Interchangeable Glass Stopper, Accuracy as per Class 'A' of I. S. 915 : 2006, White coloured Marking, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71020 55	5	0.025	C 10	20	609.00
71020 60	10	0.025	C 10	20	526.00
71020 65	20	0.040	C 10	20	526.00
71020 70	25	0.040	C 10	20	490.00
71020 75	50	0.060	C 10	20	490.00
71020 80	100	0.100	C 14	20	479.00
71020 85	200	0.150	C 14	12	651.00
71020 86	250	0.150	C 14	12	656.00
71020 90	500	0.250	C 19	12	872.00
71020 93	1000	0.400	C 19	12	1264.00



**Flasks, Volumetric, with Interchangeable Glass Stopper, Accuracy as per Class 'A' of I. S. 915 : 2006, Blue coloured Marking, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71021 55	5	0.025	C 10	20	609.00
71021 60	10	0.025	C 10	20	526.00
71021 65	20	0.040	C 10	20	526.00
71021 70	25	0.040	C 10	20	490.00
71021 75	50	0.060	C 10	20	490.00
71021 80	100	0.100	C 14	20	479.00
71021 85	200	0.150	C 14	12	651.00
71021 86	250	0.150	C 14	12	656.00
71021 90	500	0.250	C 19	12	872.00
71021 93	1000	0.400	C 19	12	1264.00



**Flasks, Volumetric, with Interchangeable Glass Stopper, Accuracy as per Class 'A', USP, White coloured Marking, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71022 55	5	0.020	C 10	20	671.00
71022 60	10	0.020	C 10	20	579.00
71022 65	20	0.030	C 10	20	579.00
71022 70	25	0.030	C 10	20	542.00
71022 75	50	0.050	C 10	20	542.00
71022 80	100	0.080	C 14	20	524.00
71022 85	200	0.100	C 14	12	717.00
71022 86	250	0.120	C 14	12	723.00
71022 90	500	0.150	C 19	12	960.00
71022 93	1000	0.300	C 19	12	1393.00





**Flasks, Volumetric, Class 'A', with Polyethylene Stopper**

**DIN 12664**

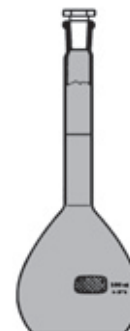
**Blue Graduation, Conformity Certified, with Batch Certificate - EM-TECHCOLOR Brand**



Cat No.	Capacity ml	Tolerance ± ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
28201 53	5	0.040	B 10	10	759.00
28201 61	10	0.040	B 10	10	602.00
28201 65	20	0.040	B 10	10	602.00
28201 70	25	0.040	B 10	10	561.00
28201 75	50	0.060	B 12	10	561.00
28201 80	100	0.100	B 12	10	555.00
28201 85	200	0.150	B 14	10	905.00
28201 86	250	0.150	B 14	10	750.00
28201 90	500	0.250	B 19	10	998.00
28201 93	1000	0.400	B 24	1	1447.00
28201 94	2000	0.600	B 29	1	2526.00

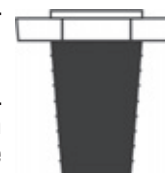
**Flasks, Volumetric, Class 'A', with Polyethylene Stopper, AMBER, Conformity Certified, with Batch Certificate - EM-TECHCOLOR Brand**

**DIN 12664**



Cat No.	Capacity ml	Tolerance ± ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
26401 53	5	0.040	B 10	10	1012.00
26401 61	10	0.040	B 10	10	840.00
26401 65	20	0.040	B 10	10	775.00
26401 70	25	0.040	B 10	10	846.00
26401 75	50	0.060	B 12	10	853.00
26401 80	100	0.100	B 12	10	949.00
26401 85	200	0.150	B 14	10	1339.00
26401 86	250	0.150	B 14	10	1240.00
26401 90	500	0.250	B 19	10	1648.00
26401 93	1000	0.400	B 24	1	2544.00

**Poly Stoppers for Volumetric Flasks, Class 'A', EM-TECHCOLOR**



Cat No.	Joint Size	Suitable for Flask capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
89002 60	10 / 19	5 to 25	10	66.00
89002 65	12 / 21	50 to 100	10	79.00
89002 70	14 / 23	200 to 250	10	90.00
89002 75	19 / 26	500	10	90.00
89002 80	24 / 29	1000	10	106.00
89002 86	29 / 32	2000	10	164.00



Flasks, Volumetric, with I/C Glass Stopper, Accuracy as per Class 'B' of I. S. 915 : 2006, **White** coloured Marking, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA

Cat No.	Capacity ml	Capacity Tolerance ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71000 55	5	0.05	C 10	20	191.00
71000 60	10	0.05	C 10	20	181.00
71000 65	20	0.08	C 10	20	181.00
71000 70	25	0.08	C 10	20	176.00
71000 75	50	0.12	C 10	20	197.00
71000 80	100	0.20	C 14	20	224.00
71000 85	200	0.30	C 14	12	254.00
71000 86	250	0.30	C 14	12	263.00
71000 90	500	0.50	C 19	12	352.00
71000 93	1000	0.80	C 19	12	526.00



Flasks, Volumetric, with I/C Glass Stopper, Accuracy as per Class 'B' of I. S. 915 : 2006, **Blue** coloured Marking, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA

Cat No.	Capacity ml	Capacity Tolerance ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71001 55	5	0.05	C 10	20	191.00
71001 60	10	0.05	C 10	20	181.00
71001 65	20	0.08	C 10	20	181.00
71001 70	25	0.08	C 10	20	176.00
71001 75	50	0.12	C 10	20	197.00
71001 80	100	0.20	C 14	20	224.00
71001 85	200	0.30	C 14	12	254.00
71001 86	250	0.30	C 14	12	263.00
71001 90	500	0.50	C 19	12	352.00
71001 93	1000	0.80	C 19	12	526.00

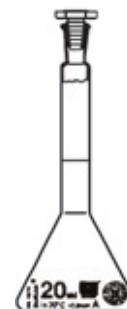


Flasks, Volumetric, with I/C Glass Stopper, AMBER, Accuracy as per Class 'B' of I. S. 915 : 2006, **White** coloured Marking, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA

Cat No.	Capacity ml	Capacity Tolerance ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71010 55	5	0.05	C 10	20	290.00
71010 60	10	0.05	C 10	20	274.00
71010 65	20	0.08	C 10	20	274.00
71010 70	25	0.08	C 10	20	263.00
71010 75	50	0.12	C 10	20	274.00
71010 80	100	0.20	C 14	20	306.00
71010 85	200	0.30	C 14	12	346.00
71010 86	250	0.30	C 14	12	356.00
71010 90	500	0.50	C 19	12	511.00
71010 93	1000	0.80	C 19	12	800.00



**Flasks, Volumetric, Trapezoidal Shape, Class 'A', with Polyethylene Stopper** DIN 12664  
**Blue Graduation, Conformity Certified, with Batch Certificate - EM-TECHCOLOR Brand**



Cat No.	Capacity ml	Tolerance ±ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29601 33	1	0.025	B 7	2	1177.00
29601 40	2	0.025	B 7	2	1196.00
29601 53	5	0.040	B 10	2	1228.00
29601 61	10	0.040	B 10	2	1260.00
29601 65	20	0.040	B 10	2	1301.00
29601 70	25	0.040	B 10	2	1350.00
29601 75	50	0.060	B 12	2	1392.00

**Funnels, with Short Stem, AR-GLAS** DIN 12445



Cat No.	O. D. Top mm	Height mm	Stem Length mm	Stem O. D. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23351 33	55	95	55	8	10	315.00
23351 38	70	120	70	8	10	383.00
23351 41	80	140	80	10	10	512.00
23351 46	100	180	100	10	10	663.00

Supplies will be without any brand mark on the Funnels.

**Funnels, Plain, 60° Angle, Long Stem, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Diameter mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73100 33	50	6	80.00
73100 38	65	6	98.00
73100 41	75	6	103.00
73100 46	100	2	138.00

**Funnels, Powder, Short Stem, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Diameter mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73100 47	125	2	281.00
73100 48	150	2	304.00
73100 50	200	2	833.00



**Funnels, Separating, Pear Shape, with Rotaflow Stopcock & I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21114 18	60	B 14	2	640.00

**Funnels, Separating, Pear Shape, with Rotaflow Stopcock & I/C Stopper,  
Made from DURAN Glass**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21114 24	100	B 19	2	799.00
21114 36	250	B 19	2	919.00
21114 44	500	B 24	1	1197.00
21114 54	1000	B 29	1	1491.00



**Funnels, Separating, Pear Shape, with Glass Stopcock & I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21115 18	60	B 14	2	716.00

**Funnels, Separating, Pear Shape, with Glass Stopcock & I/C Stopper,  
Made from DURAN Glass**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21115 24	100	B 19	2	765.00
21115 36	250	B 19	2	861.00
21115 44	500	B 24	1	1119.00
21115 54	1000	B 29	1	1451.00



**Funnels, Separating, Globe Shape, with Rotaflow Stopcock & I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21113 25	125	B 19	2	788.00

**Funnels, Separating, Globe Shape, with Rotaflow Stopcock & I/C Stopper,  
Made from DURAN Glass**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21113 36	250	B 19	2	911.00
21113 44	500	B 24	1	1148.00
21113 54	1000	B 29	1	1451.00
21113 63	2000	B 29	1	2660.00



**Funnels, Separating, Globe Shape, with Glass Stopcock & I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21112 25	125	B 19	2	788.00



**Funnels, Separating, Globe Shape, with Glass Stopcock & I/C Stopper,  
Made from DURAN Glass**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21112 36	250	B 19	2	911.00
21112 44	500	B 24	1	1148.00
21112 54	1000	B 29	1	1451.00
21112 63	2000	B 29	1	2660.00

**Filter Crucibles with Sintered Disc, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Porosity Grade	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72000 151	15	G 1	10	247.00
72000 152	15	G 2	10	247.00
72000 153	15	G 3	10	247.00
72000 154	15	G 4	10	247.00
72000 301	30	G 1	10	342.00
72000 302	30	G 2	10	342.00
72000 303	30	G 3	10	342.00
72000 304	30	G 4	10	342.00

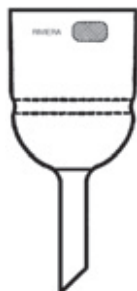


**Filter Crucibles with Sintered Disc, DURAN**

Cat No.	Capacity ml	Porosity Grade	Qty. Per Pack Pcs	Maximum Price Rs/Pc
25851 11	15	G 1	10	1456.00
25851 12	15	G 2	10	1456.00
25851 13	15	G 3	10	1456.00
25851 14	15	G 4	10	1642.00
25851 21	30	G 1	10	1239.00
25851 22	30	G 2	10	1239.00
25851 23	30	G 3	10	1239.00
25851 24	30	G 4	10	1301.00
25851 31	50	G 1	10	1735.00
25851 32	50	G 2	10	1735.00
25851 33	50	G 3	10	1735.00
25851 34	50	G 4	10	1797.00



**Funnels, Buchner Type, with Sintered Disc, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	Porosity Grade	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72010 0351	35	G 1	1	364.00
72010 0352	35	G 2	1	364.00
72010 0353	35	G 3	1	364.00
72010 0354	35	G 4	1	364.00
72010 0801	80	G 1	1	719.00
72010 0802	80	G 2	1	719.00
72010 0803	80	G 3	1	719.00
72010 0804	80	G 4	1	719.00
72010 2001	200	G 1	1	1147.00
72010 2002	200	G 2	1	1147.00
72010 2003	200	G 3	1	1147.00
72010 2004	200	G 4	1	1147.00

**Funnels, Buchner Type, with Sintered Disc, DURAN**



Cat No.	Capacity ml	Porosity Grade	Qty. Per Pack Pcs	Maximum Price Rs/Pc
25852 01	50	G 1	1	2744.00
25852 02	50	G 2	1	2744.00
25852 03	50	G 3	1	2744.00
25852 04	50	G 4	1	2861.00
25852 11	75	G 1	1	2919.00
25852 12	75	G 2	1	2919.00
25852 13	75	G 3	1	2919.00
25852 14	75	G 4	1	3210.00
25852 21	125	G 1	1	3853.00
25852 22	125	G 2	1	3853.00
25852 23	125	G 3	1	3853.00
25852 24	125	G 4	1	4086.00
25852 31	500	G 1	1	8303.00
25852 32	500	G 2	1	8303.00
25852 33	500	G 3	1	8303.00
25852 34	500	G 4	1	8985.00
25852 41	1000	G 1	1	12331.00
25852 42	1000	G 2	1	12331.00
25852 43	1000	G 3	1	12331.00
25852 44	1000	G 4	1	12641.00

**Pipeline Filters, with Sintered Disc, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	Porosity Grade	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72020 901	90	G 1	1	3158.00
72020 902	90	G 2	1	3158.00
72020 903	90	G 3	1	3158.00
72020 904	90	G 4	1	3158.00



## SINTERED GLASSWARE, DURAN

### Porosity Grades

Porosity Grade	New Identification Mark ISO 4793	Nominal Max. Pore Size $\mu\text{m}$	Fields of applications, examples
1	P 160	100 - 160	Coarse filtration. filtration of coarse precipitates, gas distribution in liquids. Liquid distribution, coarse gas filtration. Extraction apparatus for coarse grain materials. Loose filter layer substrates for gelatinous precipitates.
2	P 100	40 - 100	Preparative fine filtration. Preparative work with crystalline precipitates. Mercury filtration.
3	P 40	16 - 40	Analytical filtration. Analytical work with medium-line precipitates. Preparative work with fine precipitates. Filtration in cellulose chemistry, fine gas filtration. Extraction apparatus for fine-grained materials.
4	P 16	10 - 16	Analytical filtration. Analytical work with very fine precipitates (e. g. $\text{BaSO}_4$ , $\text{Cu}_2\text{O}$ ). Preparative work with precipitates of appropriate fineness. Non-return and stop valves for Mercury.

To determine possible application of glass filter discs and apparatus, it is necessary to know not only the porosity, but also the flow rates of liquids and gases. The data applies to filter discs of 30 mm diameter. the flow rates for other disc diameters can be calculated by multiplying the value of a 30 mm disc by the conversion factor as shown in the table below.

Filter disc diameter mm	10	20	30	40	60	90	120	150	175
Conversion factor	0.13	0.55	1.0	1.5	2.5	4.3	6.8	9.7	15.0

### CARE AND CLEANING

#### Temperature Change, Drying and Sterilization :

Please take a note of the following tips. They ensure that no inner stress occurs between the vessel and the filter discs, which can lead to the filter breaking.

1. Avoid sudden changes in temperature and unequal heating. Sintered glass filter funnels, pipe line filter tubes and other sintered glass apparatus with disc diameters exceeding 20 mm, which are to be dried or sterilized, should be placed in cold ovens or sterilizers.
2. The speed of heating and cooling should not exceed  $8^\circ\text{C}/\text{min}$ .
3. Before filtering hot substances bring the filter unit slowly up to temperature in the hot cabinet.
4. Wet filter units should be heated slowly up to  $80^\circ\text{C}$  and dried for one hour before increasing the temperature.

Filtration apparatus should, whenever possible, stand on its rim (stem upwards) in the oven or sterilizer. A perforated support base is advantageous since it allows air convection between the inside of the vessel and the body of the oven. If angled position of the filtration apparatus is unavoidable (pipeline filter tubes), then any point of support which is near to the filter seal position should be protected against premature heating. This is done by using an underlay of heat-insulating material.

The apparatus should remain in the oven or sterilizer during cooling. Due to the thermal inertia of this type of oven, the cooling time is adequate.

#### Cleaning new Sintered Glassware :

Before using sintered glass filter apparatus for the first time, hot hydrochloric acid followed by several rinses of distilled water should be sucked through the filter disc under a good vacuum. This removes dust particles and powdered glass. It is important each successive water rinse be started only after the preceding one is completely flushed through. This so-called "tear through" method must only be used for cleaning filters. It should never be adopted for preparative or analytical filtration.

#### Mechanical Cleaning

**Sintered glass filters should always be cleaned immediately after use.**

If no precipitate has entered the pores, surface rinsing under the tap or with a wash bottle is often sufficient. The filter disc surface can be wiped clean

with a small brush.

(Do not remove filter medium with sharp objects.)

Where some of the precipitate has entered the pores, backflushing is necessary. In the case of porosities 0 to 2 this can be done simply by using a water tap, connecting it with the rubber tubing to the stem of sintered piece and allowing water to run backwards through the filter disc. The water pressure must not exceed  $1\text{kp}/\text{cm}^2$ .

For porosities 3, 4 and 5 the precipitate is flushed or wiped off the disc, and the water is sucked through in the opposite direction to filtration.

Filters clogged by dirt and dust during gas filtration can be restored by treatment with a warm detergent solution followed by blowing through clean air from the clean side of the filter. Dirt particles are brought to the surface by the foam and removed by rinsing with water.

#### Chemical Cleaning

If, after mechanical cleaning, some of the pores remain clogged, or if it is desirable to make sure that no residue from the previous work remains before filtering a new substance, then thorough chemical cleaning is required. The choice of solvent obviously depends on the nature of the contamination.

For example :

Barium sulphate	- hot conc, sulphuric acid ( $100^\circ\text{C}$ )
Silver chloride	- hot ammonia liquor
Red copper oxide	- hot hydrochloric acid & potassium chloride
Mercury residue	- hot, conc. nitric acid
Mercury sulphide	- hot aqua regia
Albumen	- hot ammonia liquor or hydrochloric acid
Grease, oil	- carbon tetrachloride
Other organic substances	- hot, conc. sulphuric acid with an addition of nitric acid, sodium nitrate or potassium dichromate
Animal charcoal	- careful heating with a mixture of 5 volumes of conc. sulphuric acid + 1 volume of conc. nitric acid to about $200^\circ\text{C}$

Prolonged rinsing of water must obviously follow.

For biochemical work cleaning with dichromatic sulphuric acid should be avoided, since trivalent chromium compounds, present or newly formed by reduction, are absorbed on the surface of the filter disc. When they are released during subsequent use, biological substances can be seriously damaged. This danger is eliminated by using sulphuric acid with a nitrate or perchlorate addition. Only easily soluble reduction products are formed which can be completely removed by re-washing with water. Since hot, conc. phosphoric acid and hot alkaline solutions attack the glass surface, they are unsuitable as cleaning agents.

**CERAN, Protective laboratory plates :**

CERAN protection plates solve a problem in the laboratory which could not be avoided previously when using conventional asbestos mats. On heating, it does not release substances which are harmful to health. Apart from this main advantage of CERAN glass ceramic laboratory protective plate compared with asbestos, the use of which has been restricted or prohibited in the mean time in some countries, there are further convincing reasons for replacing the asbestos / wire mesh in all laboratories by CERAN protective plates.

**Saving in energy and time**

The good permeability of CERAN protective plates for infrared radiation results in heat energy transfer to the material to be heated with low losses. This saves 20% of time and energy. In addition, there is room for several items on the flat square area.

**Chemically resistant**

When working in the laboratory, boiling over and spilling of

aggressive

is unavoidable. Even highly aggressive media can do no damage to the CERAN laboratory protective plate.

**High temperature resistance**

Application ranging from -200°C to +700°C.

A particular advantage of CERAN laboratory protective plate is their high continuous operation temperature.

Durability at

700°C - 6000 h

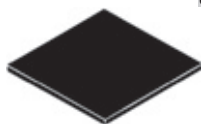
750°C - 750 h

800°C - 100 h

Even when the hot plate is quenched with cold water, there is no risk of fracture, since the resistance to temperature shock is greater than 650°C. In order to avoid overheating, care must be taken that the above mentioned limits are not exceeded when working with a bunsen burner. CERAN protective laboratory plate retains its shape and flatness and does not age.

**Laboratory Protection Plates, Made from Glass Ceramic, CERAN**

Supply will not include Metal Stand



Cat No.	Plate Dimensions mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23821 53	135 x 135	1	1582.00
23821 57	155 x 155	1	1686.00
23821 58	175 x 175	1	1964.00

**Nickel-Chrome Quadrupod for CERAN Protection Plates from SCHOTT**



Cat No.	For CERAN Plates mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29077 53	135 x 135	220	1	1903.00
29077 57	155 x 155	220	1	2246.00
29077 58	175 x 175	220	1	2621.00

**Nickel-Chrome Plate Holder for CERAN Protection Plates from SCHOTT**



Cat No.	Plate Dimensions mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29078 53	135 x 135	1	1783.00
29078 57	155 x 155	1	1997.00
29078 58	175 x 175	1	2395.00

**CERAQUICK Cleaning Scraper for CERAN Protection Plates from SCHOTT**



Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29079 01	1	998.00



**Filter Head with PP Funnel and 2 Nos. FKM Seals, DURAN**

Cat No.	Capacity ml	Disc Dia mm	Thread Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24720 24	30	24	28	1	1343.00
24720 50	250	50	54	1	3492.00
24720 90	1000	90	95	1	8260.00

\* Filter Discs with Glass Rim must be ordered separately.


**Filter Head with Screw Thread, DURAN**

Cat No.	Capacity ml	Thread Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24721 24	30	28	1	1145.00
24721 50	250	54	1	2640.00
24721 90	1000	95	1	6756.00


**PP Funnel for Filter Head**

Autoclavable upto 140° C

Cat No.	Thread Size mm	Stem Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29221 24	28	10	1	404.00
29221 50	54	12	1	509.00
29221 90	95	18	1	727.00


**Filter Disc with Glass Rim**

Cat No.	Porosity	Disc Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
25202 41	G 1	24	1	1932.00
25202 42	G 2	24	1	1932.00
25202 43	G 3	24	1	1932.00
25202 44	G 4	24	1	2096.00
25205 01	G 1	50	1	2893.00
25205 02	G 2	50	1	2893.00
25205 03	G 3	50	1	2893.00
25205 04	G 4	50	1	3001.00
25209 01	G 1	90	1	5019.00
25209 02	G 2	90	1	5019.00
25209 03	G 3	90	1	5019.00
25209 04	G 4	90	1	5456.00





FKM Seals			
Cat No.	Suitable for Disc Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29220 24	24	10	126.00
29220 50	50	10	335.00
29220 90	90	10	655.00



Slit Sieves for DURAN Filter Head Cat. No. 24720 50 Used as support for Membrane and Paper Filters			
Cat No.	Disc Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21340 31	48	10	1746.00



**Bell Jars with Knob, Clear Glass, RIVIERA**

Cat No.	Height x Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71800 180	180 x 120	1	360.00
71800 200	200 x 150	1	476.00
71800 250	250 x 150	1	720.00
71800 300	300 x 200	1	1674.00



**Bell Jars with Knob, DURAN**

Cat No.	Height x Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24460 59	250 x 185	1	11616.00
24460 66	255 x 260	1	14521.00
24460 69	300 x 315	1	21491.00



**Museum Jars with Ground-in Glass Plate, DURAN**

Cat No.	H x l x B mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21363 05	100 x 060 x 050	10	4147.00
21363 11	120 x 100 x 050	1	4497.00
21363 13	130 x 130 x 050	1	6238.00
21363 19	150 x 150 x 050	1	6783.00
21363 47	210 x 210 x 100	1	12290.00
21363 58	250 x 250 x 140	1	20202.00



## EM - TECHCOLOR PIPETTES

Pipettes are used for accurate measurements and transfer of liquids. Volumetric pipettes will only deliver specific quantities. Graduated pipettes allow take - up of different liquid volumes and delivery of the same or different quantities. Graduated and volumetric pipettes are of EM - TECHCOLOR brand. They are calibrated to deliver ("Ex") at the reference temperature of 20°C. In the case of calibrated pipettes and Class 'AS' pipettes, the tolerances on volume content corresponds to the accuracy limits of **ISO** and **DIN** standards. The accuracy limits for EM - TECHCOLOR Class 'B' type are about one

and half times that of Class 'AS'. This means that they are better than required by **ISO** and **DIN**. By specifying a Class 'AS' within the frame work or their 15th modifications order, the Federal German weights and measures authorities have recognised that an overwhelming portion of volumetric measurements, particularly in clinical laboratories is carried out on water or on dilute aqueous solutions. Thus, apparatus with the same accuracy limits, but with run-out time considerably shorter than hitherto demanded, are now admitted for calibration.

### Tolerances for Graduated measuring Pipettes calibrated to deliver

Capacity ml	Accuracy Limits Class 'AS' suitable for official calibration		Accuracy Limits Class 'B'	
	ISO 835 DIN 12697 ± ml	ISO 835 DIN 12695 ± ml	EM-TECHCOLOR ± ml	
0.1 <sup>1</sup>	-	-	0.0015	
0.2 <sup>1</sup>	-	-	0.0030	
1	0.007	0.01	0.0100	
2	0.010	0.02	0.0150	
5	0.030	0.05	0.0450	
10	0.050	0.10	0.0750	
25	0.100	0.20	0.1500	

<sup>1</sup> Non - DIN, Non - ISO size, Graduated Pipettes 0.1 and 0.2 ml are calibrated to contain ("In")

### Tolerances for Volumetric Pipettes calibrated to deliver

Capacity ml	Accuracy Limits Class 'AS' suitable for official calibration		Accuracy Limits Class 'B'	
	DIN 12691 ± ml	ISO 648 DIN 12690 ± ml	EM-TECHCOLOR ± ml	
5	0.015	0.03	0.0230	
10	0.020	0.04	0.0300	
20	0.030	0.06	0.0450	
25	0.030	0.06	0.0450	
50	0.050	0.10	0.0750	

**Pipettes, Graduated, Clear Glass, Short - Line, Graduated to Tip, Amber Stain Graduation, (Serological type), Class 'B', RIVIERA Brand**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Total Length ±5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72600 14	0.10	0.001	0.004	320	10	103.00
72600 21	0.20	0.002	0.006	320	10	98.00
72600 29	0.50	0.005	0.010	320	10	96.00
72600 33	1.00	0.010	0.008	350	10	93.00
72600 41	2.00	0.020	0.012	350	10	103.00
72600 53	5.00	0.050	0.025	350	10	113.00
72600 60	10.0	0.100	0.050	350	10	118.00
72600 70	25.0	0.100	0.100	470	10	184.00



# VOLUMETRIC GLASSWARE FROM HIRSCHMANN LABORGERATE

GRADUATED PIPETTE, CLASS 'B'  
EM-TECHCOLOR



In any laboratory volume measurement is a continuous process. The products that aid such volume measurements, are Burettes, Graduated Pipettes, Volumetric Pipettes, Volumetric Flasks, and Measuring Cylinders. These aids are available in both class A and Class B and the selection of the class depends on the application and required accuracy.

All the volumetric products are either to contain or to deliver the liquids. To contain is signified by the mark shown on the ware "in" and to deliver is signified by the mark on the ware "Ex". Products such as Measuring Cylinders and Volumetric Flasks are meant for containing whereas products such as Pipettes and Burettes are meant for delivering.

The Capacity of the "in" products will always be equivalent to the capacity printed on the ware. However the "Ex" products will show the capacity printed as that which is equivalent to the volume delivered. The residue adhering to the wetted glass surface is already taken into account while calibrating.

The division of volumetric glassware into classes **A**, **AS**, and **B** indicates the suitability for certification, degrees of accuracy and **DELIVERY** and **WAITING TIMES**. **DELIVERY TIME** is the time required for the liquid meniscus to pass from the calibration mark to standstill at the tip or at the second calibration mark.

**WAITING TIME** starts when the liquid meniscus in the

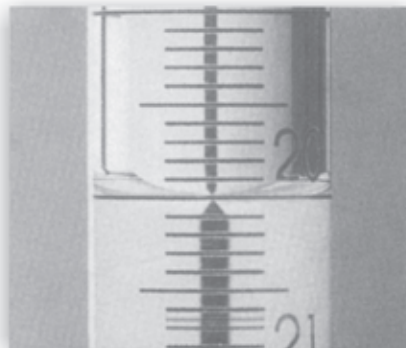
VOLUMETRIC PIPETTE, CLASS 'AS'  
EM-TECHCOLOR



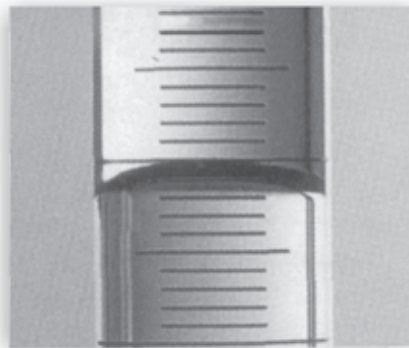
tip or at the second calibration mark has come to a stop. During the waiting time, residual liquid flows downward from the glass wall. This causes a new rise of the meniscus. After the waiting time, the pipette tip is wiped on the wall of the vessel. A small amount of liquid remains in the narrow section of the tip. But as explained previously this has been taken into account during calibration. Products of **Class A and Class AS are Conformity Certified** wares. Those, which are supposed to contain ("in"), will have class A and those, which are supposed to deliver ("Ex"), will have **Class AS**. **Class AS** has all the features of **Class A** and in addition its delivery is swift (S stands for swift delivery). **Class AS** will have a delivery time of about 15 seconds and a waiting period of another 15 seconds. The tolerances for accuracy for **Class B** remain within twice the limits defined by DIN and ISO for **Class A/AS**.

## The meniscus - How does it arise, how is it read ?

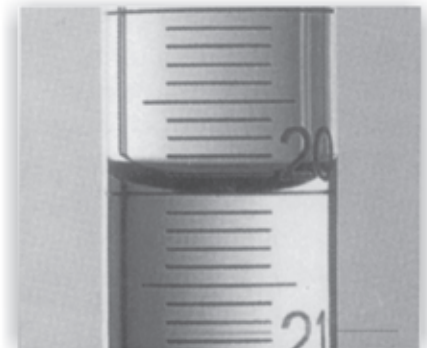
If the liquid molecules are attracted more strongly by the molecules of the glass wall (adhesion) than by their counterparts (cohesion), a concave meniscus is formed. The edge of the liquid level is drawn slightly upwards. If the diameter of a pipette is narrow enough (e. g. in a capillary), the adhesion force is sufficient to pull up not just the outer edge, but the entire liquid level. This is the whole "secret" of the capillary effect. If however, the cohesion force of a liquid is greater than the adhesion force of the glass wall, a convex meniscus is formed (e. g. Mercury)



The Schellbach stripe is a slender blue stripe in the middle of a white milkglass stripe printed at the back of the volumetric glassware. The light refraction on the surface of the liquid causes a narrowing (constriction) of the blue stripe between the top and bottom meniscus. According to DIN 12700, read-off is at the point of contact of the two tips



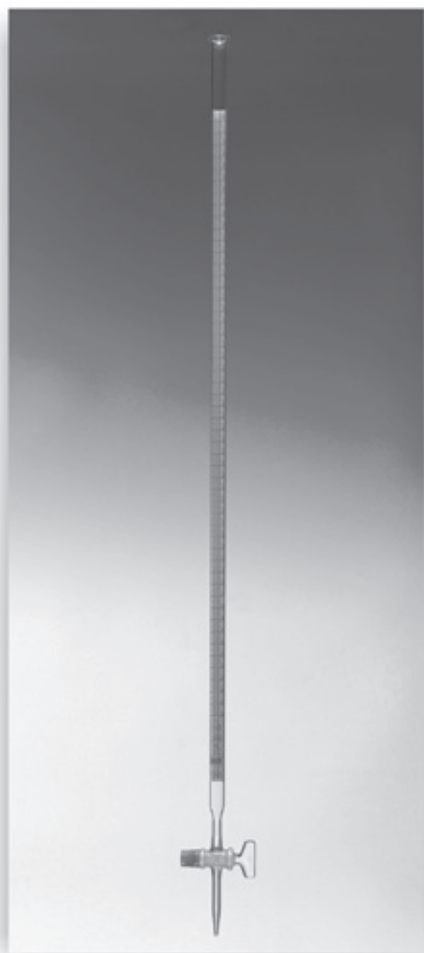
In the case of a convex meniscus, e. g. mercury, the German Industrial Standard DIN/ISO 384 and DIN 12700 requires the volume to be read at the highest point of the liquid's surface. The highest point of the meniscus must cover the lower edge of the graduation mark.



In the case of a concave meniscus, e. g. water, the German Industrial Standard DIN/ISO 384 and DIN 12700 requires the volume to be read at the lowest point of the liquid's surface. The lowest point of the meniscus must cover the upper edge of the graduation mark.

# VOLUMETRIC GLASSWARE FROM HIRSCHMANN LABORGERATE

Download Batch Certificate  
directly from website  
[www.hirschmannlab.de](http://www.hirschmannlab.de)  
[www.hirschmann-laborgeraete.de](http://www.hirschmann-laborgeraete.de)



SCHELLBACH BURETTE, CLASS 'AS'  
EM-TECHCOLOR



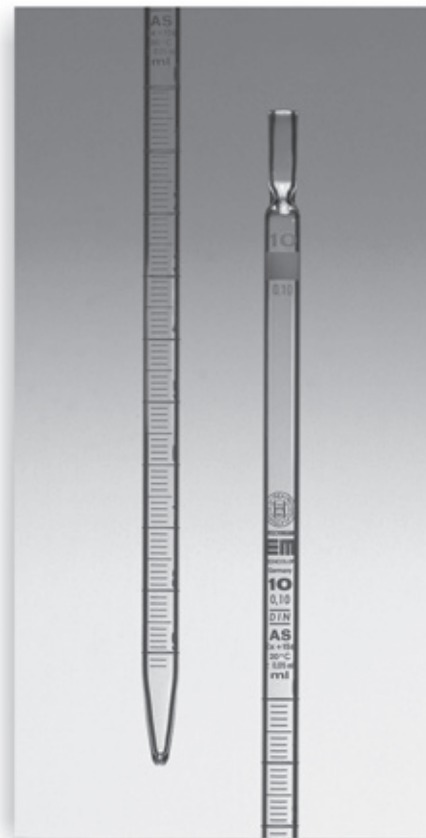
MEASURING CYLINDER, CLASS 'A'  
EM-TECHCOLOR



VOLUMETRIC FLASK, CLASS 'A'  
EM-TECHCOLOR



VOLUMETRIC PIPETTE, CLASS 'AS'  
EM-TECHCOLOR



SCHELLBACH GRADUATED PIPETTE,  
CLASS 'AS', EM-TECHCOLOR



# CERTIFICATE

The Certification Body  
of TÜV SÜD Management Service GmbH  
certifies that

**Hirschmann Laborgeräte  
GmbH & Co. KG**  
Hauptstr. 7-15  
D-74246 Eberstadt

has established and applies  
a Quality Management System for

**Development, Production and  
Distribution of Laboratory Equipment  
and Laboratory Consumables.**

An audit was performed, Report No. **70007040**  
Proof has been furnished that the requirements  
according to

**ISO 9001:2008**

are fulfilled. The certificate is valid until **2014-12-21**  
Certificate Registration No. **12 100 26974 TMS**

Munich, 2012-01-02



QMS-TGA-ZM-07-92

Deutscher Kalibrierdienst (DKD)  
Accreditation Body  
represented in

Deutscher AkkreditierungsRat



Accreditation

The Accreditation Body of **Deutscher Kalibrierdienst** hereby accredits  
Hirschmann Laborgeräte GmbH & Co. KG  
Hauptstraße 7 - 15  
74246 Eberstadt

according to DIN EN ISO/IEC 17025: 2005 for calibrations in the field / fields:

volume

Part of the certificate is: Annex 02 (2 pages), 2003-03-24

DAR registration number: DKD-K-31301  
DKD accredited since: 2002-01-17

Braunschweig, 2007-05-25

Dr.-Ing. Wolfgang Bosch  
Head of Accreditation Body





**Pipettes, Graduated, Clear Glass, Short - Line, Graduated to Tip, Amber Stain Graduation, (Serological type), Class 'B', EM-TECHCOLOR Brand** DIN 12695

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10001 33	1	0.01	0.010	360	12	103.00
10001 35	1	0.10	0.010	360	12	97.00
10001 41	2	0.02	0.015	360	12	115.00
10001 42	2	0.10	0.015	360	12	109.00
10001 53	5	0.05	0.045	360	12	128.00
10001 54	5	0.10	0.045	360	12	122.00
10001 60	10	0.10	0.075	360	12	134.00
10001 70	25	0.10	0.150	450	6	207.00



**Precision Graduated Pipettes, Clear Glass, Short-Line, Graduated to Tip, Amber Stain Graduation, (Serological type), Class 'B', EM-TECHCOLOR Brand** DIN 12695

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10001 29	0.5	0.010	0.0075	360	12	267.00



**Pipettes, Graduated, Clear Glass, Main Point Ring Graduation, Graduated to Tip, Amber Stain Graduation, (Serological type), Class 'AS', Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand** DIN 12697

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11001 33	1	0.01	0.007	360	12	322.00
11001 35	1	0.10	0.007	360	12	298.00
11001 41	2	0.02	0.010	360	12	337.00
11001 42	2	0.10	0.010	360	12	310.00
11001 53	5	0.05	0.030	360	12	395.00
11001 54	5	0.10	0.030	360	12	365.00
11001 60	10	0.10	0.050	360	12	419.00
11001 70	25	0.10	0.100	450	6	492.00



**Pipettes, Graduated, Clear Glass, Main Point Blue Ring Graduation, Graduated to Tip, Schellbach, (Serological type), Class 'AS', Conformity Certified, with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand**

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11101 33	1	0.01	0.007	360	12	354.00
11101 41	2	0.02	0.010	360	12	370.00
11101 53	5	0.05	0.030	360	12	434.00
11101 54	5	0.10	0.030	360	12	401.00
11101 60	10	0.10	0.050	360	12	461.00
11101 70	25	0.10	0.100	450	6	541.00





Pipettes, Graduated, Clear Glass, Short-Line, Graduated, Capacity Mark above shoulder, **DIN 12695**  
 Amber Stain Graduation, (Mohr type), Class 'B', EM-TECHCOLOR Brand

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
10002 33	1	0.01	0.010	360	12	103.00
10002 35	1	0.10	0.010	360	12	97.00
10002 41	2	0.02	0.015	360	12	115.00
10002 42	2	0.10	0.015	360	12	109.00
10002 53	5	0.05	0.045	360	12	128.00
10002 54	5	0.10	0.045	360	12	122.00
10002 60	10	0.10	0.075	360	12	134.00
10002 70	25	0.10	0.150	450	6	207.00



Pipettes, Graduated, Clear Glass, Main Point Ring Graduation, Graduated Capacity Mark above Shoulder, **DIN 12697**  
 Amber Stain Graduation, (Mohr type), Class 'AS', Conformity Certified, with Batch Certificate,  
 Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Total Length $\pm$ 5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11002 33	1	0.01	0.007	360	12	322.00
11002 35	1	0.10	0.007	360	12	298.00
11002 41	2	0.02	0.010	360	12	337.00
11002 42	2	0.10	0.010	360	12	310.00
11002 53	5	0.05	0.030	360	12	395.00
11002 54	5	0.10	0.030	360	12	365.00
11002 60	10	0.10	0.050	360	12	419.00
11002 70	25	0.10	0.100	450	6	492.00



Pipettes, Volumetric, Clear Glass, One Mark, Amber Stain Graduation, Class 'A', Conformity Certified, **DIN 12691**  
 with Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, EM-TECHCOLOR Brand

Cat No.	Capacity ml	Tolerance $\pm$ ml	Total Length $\pm$ 10mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
13401 33	1	0.007	300	12	237.00
13401 40	2	0.010	330	12	243.00
13401 48	3	0.010	350	6	270.00
13401 50	4	0.015	400	6	288.00
13401 55	5	0.015	400	6	291.00
13401 56	6	0.015	410	6	498.00
13401 57	7	0.015	410	6	498.00
13401 58	8	0.020	450	6	608.00
13401 59	9	0.020	450	6	608.00
13401 60	10	0.020	440	6	328.00
13401 64	15	0.030	510	6	420.00
13401 65	20	0.030	510	6	425.00
13401 70	25	0.030	520	6	456.00
13401 75	50	0.050	540	6	552.00





**Pipettes, Transfer, Volumetric, Accuracy as per Class 'B' of I. S. 1117 : 1975, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72700 33	1	0.015	25	90.00
72700 40	2	0.020	25	90.00
72700 55	5	0.030	25	95.00
72700 60	10	0.040	25	114.00
72700 65	20	0.060	25	135.00
72700 70	25	0.060	25	141.00
72700 75	50	0.100	12	166.00
72700 80	100	0.160	6	255.00



**Pipette, Transfer, Volumetric, Accuracy as per Class 'A' of I.S. 1117: 1975, Made from Heat Resistant, Low Expansion Borosilicate Glass, with Individual Certificate of Performance, RIVIERA**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72710 33	1	0.007	25	208.00
72710 40	2	0.010	25	223.00
72710 55	5	0.150	25	238.00
72710 60	10	0.020	25	280.00
72710 65	20	0.030	25	363.00
72710 70	25	0.030	25	390.00
72710 75	50	0.050	12	436.00
72710 80	100	0.080	6	664.00

**Culture Tubes, Round Bottom, with DIN Thread with Screw-Cap made of PP and Rubber Gasket, (Suitable for food use) Sterilizable at 1 bar 121°C, AR-GLAS**



Cat No.	O. D. x Length mm	DIN Thread GL	Wall Thickness mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23175 115	12 x 100	14	1	100	46.00
23175 145	16 x 100	18	1	100	51.00
23175 215	16 x 160	18	1	100	61.00
23175 235	18 x 180	18	1	100	79.00

Supplies will be without any brand mark on the Culture Tubes.

**Culture Tubes, Round Bottom, with Screw Cap and Silicone Liner, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Capacity ml	O. D. x Length mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71300 055	5	16 x 75	100	30.00
71300 105	10	16 x 125	100	36.00
71300 305	30	25 x 100	100	52.00
71300 605	60	25 x 200	100	57.00



**Culture Tubes, Round Bottom, AMBER, with Screw Cap and Silicone Liner,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	O. D. x Length mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71310 055	5	16 x 75	100	68.00
71310 105	10	16 x 125	100	102.00
71310 305	30	25 x 100	100	119.00
71310 605	60	25 x 200	100	133.00



**Culture Tubes, Flat Bottom, with Screw Cap and Silicone Liner,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	O. D. x Length mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71200 055	5	16 x 50	100	30.00
71200 155	15	25 x 57	100	36.00
71200 305	30	25 x 95	100	52.00



**Culture Tubes, Flat Bottom, AMBER, with Screw Cap and Silicone Liner,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	O. D. x Length mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71210 055	5	16 x 50	100	68.00
71210 155	15	25 x 57	100	94.00
71210 305	30	25 x 95	100	115.00



**PP Caps only for Culture tubes with Silicone Liner, RIVIERA**

Cat No.	Suitable for OD mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71220 016	16	100	8.00
71220 025	25	100	9.00



**Tubes, Centrifuge, Conical, Ungraduated, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Dia mm	Total Length ±5 mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72800 15	15	19	120	100	35.00
72800 50	50	33	150	100	98.00



**Tubes, Centrifuge, Conical, Ungraduated**

Cat No.	Capacity ml	Dia mm	Total Length ±5 mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
60001 01	15	17	112	100	42.00



Supplies will be without any brand mark on the Centrifuge Tubes.



**Tubes, Centrifuge, Conical, Graduated with White Graduation,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	O. D. mm	Total Length $\pm 5$ mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72810 15	15	19	120	100	86.00
72810 50	50	33	150	100	181.00



**Tubes, Centrifuge, Conical, Graduated with White Graduation**

Cat No.	Capacity ml	Graduation Division ml	Total Length $\pm 5$ mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
60201 01	15	0.1	112	100	114.00



**Test Tubes, with Rim, Borosilicate Glass,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, (suitable for heating applications), RIVIERA**

Cat No.	Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71100 001	10 x 75	100	5.25
71100 002	12 x 75	100	5.90
71100 003	12 x 100	100	7.25
71100 004	15 x 125	100	9.60
71100 005	15 x 150	100	11.75
71100 006	18 x 150	100	12.80
71100 007	25 x 100	50	16.90
71100 008	25 x 150	50	19.25
71100 009	25 x 200	50	25.60
71100 010	32 x 200	25	39.50
71100 011	38 x 200	25	47.50



**Test Tubes, without Rim, Borosilicate Glass,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, (suitable for heating applications), RIVIERA**

Cat No.	Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71110 001	10 x 75	100	5.25
71110 002	12 x 75	100	5.90
71110 003	12 x 100	100	7.25
71110 004	15 x 125	100	9.60
71110 005	15 x 150	100	11.75
71110 006	18 x 150	100	12.80
71110 007	25 x 100	50	16.90
71110 008	25 x 150	50	19.25
71110 009	25 x 200	50	25.60
71110 010	32 x 200	25	39.50
71110 011	38 x 200	25	47.50



**Test Tubes, with Rim, Borosilicate Glass, (NOT suitable for heating applications), RIVIERA**

Cat No.	Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23277 001	10 x 75	100	3.95
23277 002	12 x 75	100	4.50
23277 003	12 x 100	100	5.65
23277 004	15 x 125	100	7.45
23277 005	15 x 150	100	9.00
23277 006	18 x 150	100	11.25



**Test Tubes, without Rim, Borosilicate Glass, (NOT suitable for heating applications), RIVIERA**

Cat No.	Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23278 001	10 x 75	100	3.95
23278 002	12 x 75	100	4.50
23278 003	12 x 100	100	5.65
23278 004	15 x 125	100	7.45
23278 005	15 x 150	100	9.00
23278 006	18 x 150	100	11.25



**KETTLES** offered below are designed for organic reactions of viscous liquids. Covers are provided with openings containing interchangeable joints for quick assembly with condensers and stirrers.

**Kettles, Reaction, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Body Dia. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74600 05	500	95	178	1	8078.00
74600 10	1000	108	178	1	8447.00
74600 20	2000	140	190	1	10407.00
74600 40	4000	140	343	1	12616.00



**Bottoms for Reaction Kettles, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74610 05	500	1	3637.00
74610 10	1000	1	4099.00
74610 20	2000	1	5478.00
74610 40	4000	1	8235.00



**Covers for Reaction Kettles, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Size mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74620 05	500	1	6091.00
74620 10	1000	1	6091.00
74620 20	2000	1	7160.00
74620 40	4000	1	7160.00



Covers for 500 & 1000ml capacity are interchangeable, with four 24/29 I/C joints. For 2000 & 4000ml capacity covers have three 24/29 & one 34/35 I/C joint

**Vessels, Wide Mouth, Flat Flange, 100 mm I. D. & 150 mm O. D., Made from DURAN**

Cat No.	Capacity ml	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
40009 01	1000	170	1	1393.00
40009 02	2000	205	1	1895.00
40009 05	5000	260	1	4298.00
40009 10	10000	320	1	8995.00
40009 20	20000	400	1	15761.00



**Lids for Reaction Vessels, Flat Flange and Interchangeable Joints,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**



Cat No.	Centre Joint	Parallel Joint	Side Joint 5 °	Side Joint 10 °	Side Joint 15 °	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74700 2232	19/26	19/26	24/29	19/26		1	2539.00
74700 2111	19/26	14/23	14/23	14/23	29/32	1	2539.00
74700 4111	29/32	14/23	14/23	14/23	29/32	1	2539.00

**Watch Glass Dishes, RIVIERA**



Cat No.	O. D. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71900 41	80	10	55.00
71900 46	100	10	65.00
71900 52	125	10	75.00
71900 57	150	10	98.00

**Watch Glass Dishes, AR-GLAS**



Cat No.	O. D. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23321 41	80	10	205.00
23321 46	100	10	243.00
23321 52	125	10	321.00
23321 57	150	10	442.00

Supplies will be without any brand mark on the Watch Glasses.

**Dishes, Petri - DUROPLAN**

These Petri Dishes are made by using special manufacturing process. They are superior to other types because they allow even distribution of culture media and have a distortion free transparency. Also they are unlimited Autoclavable.



Cat No.	Lid O. D. x Height mm	Base O. D. x Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21755 41	60 x 20	55 x 22	10	850.00
21755 43	80 x 20	74 x 22	10	965.00
21755 46	100 x 15	94 x 17	10	1248.00
21755 53	150 x 30	143 x 32	10	2607.00

**Plastic Clamps for Joint Fittings**



Cat No.	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77600 14	B 14	10	39.00
77600 19	B 19	10	41.00
77600 24	B 24	10	42.00
77600 29	B 29	10	45.00




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**Flasks, Flat Bottom, Centre Neck, with I/C Joint, Made from DURAN**

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<b>Cat No.</b>	<b>Capacity ml</b>	<b>Joint Size</b>	<b>Qty. Per Pack Pcs</b>	<b>Maximum Price Rs/Pc</b>
204010 36	250	B 14	4	261.00
204020 36	250	B 19	4	261.00
204030 36	250	B 24	4	261.00
204040 36	250	B 29	4	261.00
204050 36	250	B 34	4	308.00
204010 44	500	B 14	4	346.00
204020 44	500	B 19	4	346.00
204030 44	500	B 24	4	346.00
204040 44	500	B 29	4	346.00
204050 44	500	B 34	4	416.00
204020 54	1000	B 19	2	461.00
204030 54	1000	B 24	2	461.00
204040 54	1000	B 29	2	461.00
204050 54	1000	B 34	2	553.00
204070 54	1000	B 45	2	602.00
204090 54	1000	B 55	2	602.00
204030 64	2000	B 24	2	1151.00
204040 64	2000	B 29	2	1151.00
204050 64	2000	B 34	2	1151.00
204070 64	2000	B 45	2	1285.00
204030 68	3000	B 24	1	2505.00
204040 68	3000	B 29	1	2505.00
204050 68	3000	B 34	1	2505.00
204070 68	3000	B 45	1	2708.00
204090 68	3000	B 55	1	2708.00
204030 73	5000	B 24	1	3722.00
204040 73	5000	B 29	1	3722.00
204050 73	5000	B 34	1	3722.00
204070 73	5000	B 45	1	3722.00
204090 73	5000	B 55	1	3722.00



**Available in RIVIERA Brand — Prices on Request**

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**Flasks, Round Bottom, Centre Neck, with I/C Joint, Made from DURAN**


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<b>Cat No.</b>	<b>Capacity ml</b>	<b>Joint Size</b>	<b>Qty. Per Pack Pcs</b>	<b>Maximum Price Rs/Pc</b>
206010 36	250	B 14	4	268.00
206020 36	250	B 19	4	268.00
206030 36	250	B 24	4	268.00
206040 36	250	B 29	4	268.00
206050 36	250	B 34	4	268.00
206010 44	500	B 14	4	297.00
206020 44	500	B 19	4	297.00
206030 44	500	B 24	4	297.00
206040 44	500	B 29	4	297.00
206050 44	500	B 34	4	297.00
206020 54	1000	B 19	2	396.00
206030 54	1000	B 24	2	396.00
206040 54	1000	B 29	2	396.00
206050 54	1000	B 34	2	396.00
206070 54	1000	B 45	2	500.00
206090 54	1000	B 55	2	500.00
206030 64	2000	B 24	2	959.00
206040 64	2000	B 29	2	959.00
206050 64	2000	B 34	2	959.00
206070 64	2000	B 45	2	1079.00
206030 68	3000	B 24	1	2733.00
206040 68	3000	B 29	1	2733.00
206050 68	3000	B 34	1	2733.00
206070 68	3000	B 45	1	3028.00
206090 68	3000	B 55	1	3028.00
206030 73	5000	B 24	1	4134.00
206040 73	5000	B 29	1	4134.00
206050 73	5000	B 34	1	4134.00
206070 73	5000	B 45	1	4134.00
206090 73	5000	B 55	1	4134.00
206050 86	10000	B 34	1	6073.00
206070 86	10000	B 45	1	6073.00
206090 86	10000	B 55	1	6073.00
206090 91	20000	B 55	1	9966.00

Available in RIVIERA Brand — Prices on Request

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**Flasks, Round Bottom, Two Necks, Centre Neck and One Angled Side Neck, each with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
306031 36	250	B 24	B 14	4	465.00
306032 36	250	B 24	B 19	4	465.00
306031 44	500	B 24	B 14	4	538.00
306032 44	500	B 24	B 19	4	538.00
306031 54	1000	B 24	B 14	2	674.00
306032 54	1000	B 24	B 19	2	674.00
306031 64	2000	B 24	B 14	2	1354.00
306032 64	2000	B 24	B 19	2	1354.00
306052 64	2000	B 34	B 19	2	1354.00
306032 68	3000	B 24	B 19	1	3281.00
306052 68	3000	B 34	B 19	1	3281.00
306053 68	3000	B 34	B 24	1	3357.00
306052 73	5000	B 34	B 19	1	4725.00
306053 73	5000	B 34	B 24	1	4725.00
306063 73	5000	B 40	B 24	1	4877.00
306052 86	10000	B 34	B 19	1	7004.00
306053 86	10000	B 34	B 24	1	7004.00
306073 86	10000	B 45	B 24	1	7004.00
306074 86	10000	B 45	B 29	1	7004.00
306075 86	10000	B 45	B 34	1	7004.00
306095 86	10000	B 55	B 34	1	7004.00
306097 86	10000	B 55	B 45	1	7004.00
306095 91	20000	B 55	B 34	1	11092.00
306097 91	20000	B 55	B 45	1	11092.00

Available in RIVIERA Brand — Prices on Request


**Flasks, Round Bottom, Two Necks, Centre Neck and One Parallel Side Neck, each with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
406031 36	250	B 24	B 14	4	465.00
406032 36	250	B 24	B 19	4	465.00
406031 44	500	B 24	B 14	4	538.00
406032 44	500	B 24	B 19	4	538.00
406031 54	1000	B 24	B 14	2	674.00
406032 54	1000	B 24	B 19	2	674.00
406031 64	2000	B 24	B 14	2	1354.00
406032 64	2000	B 24	B 19	2	1354.00
406052 64	2000	B 34	B 19	2	1354.00
406032 68	3000	B 24	B 19	1	3281.00
406052 68	3000	B 34	B 19	1	3281.00
406053 68	3000	B 34	B 24	1	3357.00
406052 73	5000	B 34	B 19	1	4725.00
406053 73	5000	B 34	B 24	1	4725.00
406063 73	5000	B 40	B 24	1	4877.00
406052 86	10000	B 34	B 19	1	7004.00
406053 86	10000	B 34	B 24	1	7004.00
406073 86	10000	B 45	B 24	1	7004.00
406074 86	10000	B 45	B 29	1	7004.00
406075 86	10000	B 45	B 34	1	7004.00
406095 86	10000	B 55	B 34	1	7004.00
406097 86	10000	B 55	B 45	1	7004.00
406095 91	20000	B 55	B 34	1	11092.00
406097 91	20000	B 55	B 45	1	11092.00

Available in RIVIERA Brand — Prices on Request



**Flasks, Round Bottom, Three Necks, Centre Neck and Two Angled Side Necks,  
each with I/C Joint, Made from DURAN**



Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
306121 36	250	B 19	B 14	4	669.00
306222 36	250	B 19	B 19	4	669.00
306131 36	250	B 24	B 14	4	669.00
306232 36	250	B 24	B 19	4	669.00
306141 36	250	B 29	B 14	4	669.00
306242 36	250	B 29	B 19	4	669.00
306121 44	500	B 19	B 14	4	871.00
306222 44	500	B 19	B 19	4	871.00
306131 44	500	B 24	B 14	4	871.00
306232 44	500	B 24	B 19	4	871.00
306141 44	500	B 29	B 14	4	871.00
306242 44	500	B 29	B 19	4	871.00
306131 54	1000	B 24	B 14	2	957.00
306232 54	1000	B 24	B 19	2	957.00
306333 54	1000	B 24	B 24	2	957.00
306242 54	1000	B 29	B 19	2	957.00
306252 54	1000	B 34	B 19	2	957.00
306353 54	1000	B 34	B 24	2	957.00
306131 64	2000	B 24	B 14	2	1824.00
306232 64	2000	B 24	B 19	2	1824.00
306242 64	2000	B 29	B 19	2	1824.00
306252 64	2000	B 34	B 19	2	1824.00
306353 64	2000	B 34	B 24	2	1824.00
306363 64	2000	B 40	B 24	2	1824.00
306232 68	3000	B 24	B 19	1	4065.00
306252 68	3000	B 34	B 19	1	4246.00
306353 68	3000	B 34	B 24	1	4246.00
306363 68	3000	B 40	B 24	1	4246.00
306252 73	5000	B 34	B 19	1	5497.00
306555 73	5000	B 34	B 34	1	5497.00
306363 73	5000	B 40	B 24	1	5497.00
306383 73	5000	B 50	B 24	1	5600.00
306252 86	10000	B 34	B 19	1	9682.00
306353 86	10000	B 34	B 24	1	9682.00
306373 86	10000	B 45	B 24	1	9682.00
306474 86	10000	B 45	B 29	1	9682.00
306575 86	10000	B 45	B 34	1	9682.00
306595 86	10000	B 55	B 34	1	9682.00
306797 86	10000	B 55	B 45	1	9682.00
306595 91	20000	B 55	B 34	1	13757.00
306797 91	20000	B 55	B 45	1	13757.00

Available in RIVIERA Brand — Prices on Request



**Flasks, Round Bottom, Three Necks, Centre Neck and Two Parallel Side Necks, each with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
406121 36	250	B 19	B 14	4	669.00
406222 36	250	B 19	B 19	4	669.00
406131 36	250	B 24	B 14	4	669.00
406232 36	250	B 24	B 19	4	669.00
406141 36	250	B 29	B 14	4	669.00
406242 36	250	B 29	B 19	4	669.00
406121 44	500	B 19	B 14	4	871.00
406222 44	500	B 19	B 19	4	871.00
406131 44	500	B 24	B 14	4	871.00
406232 44	500	B 24	B 19	4	871.00
406141 44	500	B 29	B 14	4	871.00
406242 44	500	B 29	B 19	4	871.00
406131 54	1000	B 24	B 14	2	957.00
406232 54	1000	B 24	B 19	2	957.00
406333 54	1000	B 24	B 24	2	957.00
406141 54	1000	B 29	B 14	2	957.00
406242 54	1000	B 29	B 19	2	957.00
406252 54	1000	B 34	B 19	2	957.00
406353 54	1000	B 34	B 24	2	957.00
406272 54	1000	B 45	B 19	2	1026.00
406373 54	1000	B 45	B 24	2	1026.00
406131 64	2000	B 24	B 14	2	1824.00
406232 64	2000	B 24	B 19	2	1824.00
406333 64	2000	B 24	B 24	2	1824.00
406141 64	2000	B 29	B 14	2	1824.00
406242 64	2000	B 29	B 19	2	1824.00
406252 64	2000	B 34	B 19	2	1824.00
406353 64	2000	B 34	B 24	2	1824.00
406363 64	2000	B 40	B 24	2	1958.00
406272 64	2000	B 45	B 19	2	1958.00
406373 64	2000	B 45	B 24	2	1958.00
406232 68	3000	B 24	B 19	1	4246.00
406252 68	3000	B 34	B 19	1	4246.00
406353 68	3000	B 34	B 24	1	4246.00
406363 68	3000	B 40	B 24	1	4246.00
406272 68	3000	B 45	B 19	1	4468.00
406373 68	3000	B 45	B 24	1	4468.00
406252 73	5000	B 34	B 19	1	5497.00
406353 73	5000	B 34	B 24	1	5497.00
406555 73	5000	B 34	B 34	1	5497.00
406363 73	5000	B 40	B 24	1	5497.00
406272 73	5000	B 45	B 19	1	5600.00
406373 73	5000	B 45	B 24	1	5600.00
406383 73	5000	B 50	B 24	1	5600.00
406252 86	10000	B 34	B 19	1	9682.00
406353 86	10000	B 34	B 24	1	9682.00
406373 86	10000	B 45	B 24	1	9682.00
406474 86	10000	B 45	B 29	1	9682.00
406575 86	10000	B 45	B 34	1	9682.00
406595 86	10000	B 55	B 34	1	9682.00
406797 86	10000	B 55	B 45	1	9682.00
406595 91	20000	B 55	B 34	1	13757.00
406797 91	20000	B 55	B 45	1	13757.00



Available in RIVIERA Brand — Prices on Request



**Flasks, Round Bottom, Four Necks, Centre Neck and Three Angled Side Necks, each with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
306000 44	500	All Sizes	All Sizes	4	1109.00
306000 54	1000	All Sizes	All Sizes	2	1208.00
306000 64	2000	All Sizes	All Sizes	2	2260.00
306000 68	3000	All Sizes	All Sizes	1	4987.00
306000 73	5000	All Sizes	All Sizes	1	5908.00
306000 86	10000	All Sizes	All Sizes	1	10867.00
306000 91	20000	All Sizes	All Sizes	1	14201.00

**Available in RIVIERA Brand — Prices on Request**

**Note :** While placing Order, required **Joint Sizes** should be specified



**Flasks, Round Bottom, Four Necks, Centre Neck and Three Parallel Side Necks, each with I/C Joint, Made from DURAN**

Cat No.	Capacity ml	Centre Joint Size	Side Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
406000 44	500	All Sizes	All Sizes	4	1109.00
406000 54	1000	All Sizes	All Sizes	2	1208.00
406000 64	2000	All Sizes	All Sizes	2	2260.00
406000 68	3000	All Sizes	All Sizes	1	4987.00
406000 73	5000	All Sizes	All Sizes	1	5908.00
406000 86	10000	All Sizes	All Sizes	1	10867.00
406000 91	20000	All Sizes	All Sizes	1	14201.00

**Available in RIVIERA Brand — Prices on Request**

**Note :** While placing Order, required **Joint Sizes** should be specified

# Products for Microbiology



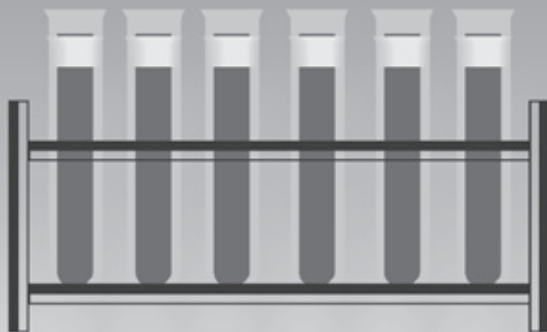
## Steristoppers<sup>®</sup>



**HEINZ HERENZ**



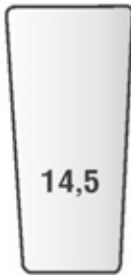
Autoclavable test tubes  
for culture work





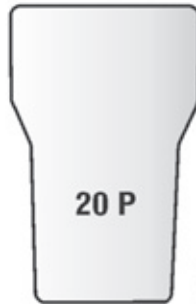
For test tube O.D. 15 mm  
I.D. 12.50 to 13.50 mm  
Cat. No. 2011307

**13 H**



For test tube O.D. 18 mm  
I. D. 14.00 to 16.00 mm  
Cat. No. 2011450

**14,5**



For test tube O.D. 25 mm  
I.D. 19.00 to 22.50 mm  
Cat. No. 2012001

**20 P**



For test tube O.D. 32 mm  
I. D. 25.50 to 29.00 mm  
Cat. No. 2012723

**MA 2/3**



For test tube O.D. 38 mm  
for conical flask 250 & 500 ml  
I.D. 27.00 to 32.50 mm  
Cat. No. 2012700

**27**



For conical flask 2, 3 & 5 Ltr.  
for solution bottle 10 & 20 Ltr.  
I.D. 47.00 to 48.00 mm  
Cat. No. 2014501

**45**



For conical flask 1000ml  
I.D. 35.50 to 39.50 mm  
Cat. No. 2013600

**36**



## STERISTOPPERS

STERISTOPPERS are manufactured by M/s. Heinz Herenz, Hamburg, Germany who have 45 years of experience and operate in more than 60 countries across the world. Their speciality is in laboratory consumables and hospital supplies. They are reputed for their own innovative designs and developmental activity having a number of patents and copyrights in their own name.

STERISTOPPERS are generally used as sealing for Microbiological and Tissue culture samples in test tubes, conical flasks and solution bottles. They replace traditional aluminium foils or cotton plugs which normally take considerable time to prepare. Besides, such sealings may not be foolproof from the point of view of contamination. Therefore, STERISTOPPERS answer all the problems associated with traditional sealings.

Some of the unique features of STERISTOPPERS are :

- Easy and immediate fixing.
- Active breathing for micro-organisms and bacteria as they are air permeable.
- No contamination from outside.

- A special manufacturing process makes them sterilizable up to 200° C.
- Reusable after sterilization.
- Tight fitting to ensure airtight and dust free working.
- Time and money saving.
- Also used for covering sharp pointed needles and instruments, specially for sterile sealing in pouches.

In addition to the sizes mentioned in this pricelist, there are many other sizes of STERISTOPPERS available which are suitable for different applications involving various kinds of glassware and for other laboratory usage.

In order to select the correct size of STERISTOPPERS the internal diameter of the glassware would be relevant.

Therefore, for sizes other than those mentioned in this pricelist, we request you to inform us the internal diameter of the neck of the glassware in which the STERISTOPPERS are required to be fitted so that a proper selection of the size can be made by us before making our offer.

### STERISTOPPERS - Sterilizable & Reusable Stoppers Made of Cellulose.

Items are generally used as sealing for Microbiological & tissue culture samples in the test tubes, conical flasks and solution bottles

Cat No.	Size	Suitable For	Qty. Per Pack Pcs	Maximum Price Rs/Pc
20113 07	13 H	Test Tube O. D. 15 mm	100	11.00
20114 50	14.5	Test Tube O. D. 18 mm	100	12.00
20120 01	20P	Test Tube O. D. 25 mm	100	15.00
20127 23	MA 2/3	Test Tube O. D. 32 mm	50	37.00
20127 00	27	Test Tube O. D. 38 mm Conical Flask 250 ml Conical Flask 500 ml	50	30.00
20136 00	36	Conical Flask 1000 ml	50	48.00
20145 01	45P	Conical Flask 2, 3, & 5 Ltr. Solution Bottle 10 & 20 Ltr.	30	107.00

## Microscope Slides

Microscope Slides are essential part of the system for illuminating specimens for examination under a Microscope. Together with the microscope it facilitates illumination of the specimen for observation.

The RIVIERA Microscope Slides are made from high quality transparent and colourless glass sheets having excellent optical transmission characteristics and parallelism between the surfaces.

The Microscope Slides are manufactured on special purpose, precision, high speed glass cutting machines which ensure excellent dimensional control and edges are free from any defects. The cut edges are then ground to a uniform consistency to make the slides absolutely safe in handling. Besides ground edges, double frosted slides are also available for identification of specimens and records.

### Microscope Slides, Ground Edges, RIVIERA

Cat No.	Size L x W +1.0/-0 mm	Thickness +0.2/-0 mm	Slides Per Packet Pcs	Qty. Per Case Packets	Maximum Price Rs/Packet
72900 135	75 x 25	1.00	50	10	62.00

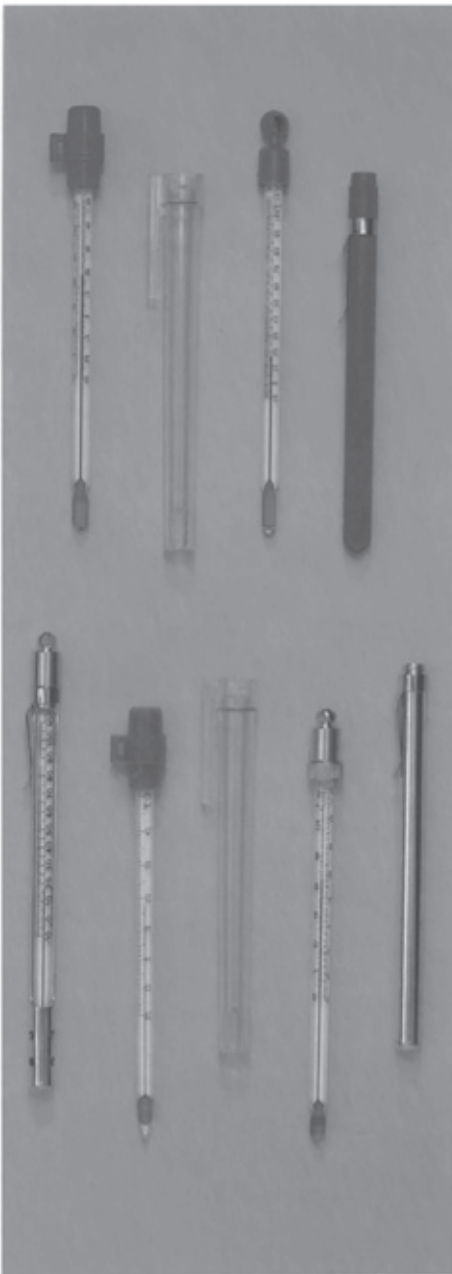
### Microscope Slides, with Ground Edges, Frosted, RIVIERA

Cat No.	Size L x W +1.0/-0 mm	Thickness +0.2/-0 mm	Slides Per Packet Pcs	Qty. Per Case Packets	Maximum Price Rs/Packet
72910 135	75 x 25	1.00	50	10	87.00



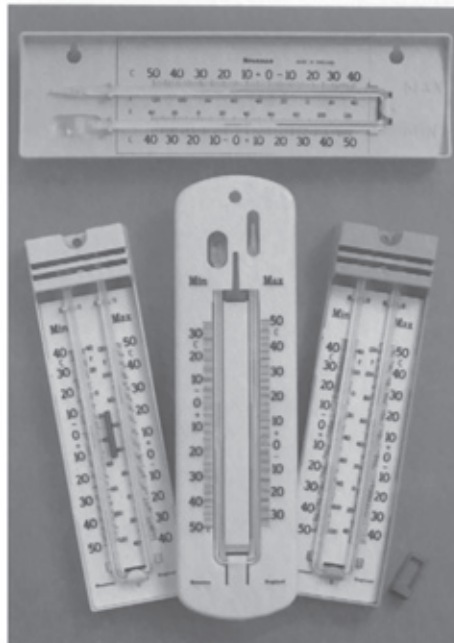


# Thermometers from England

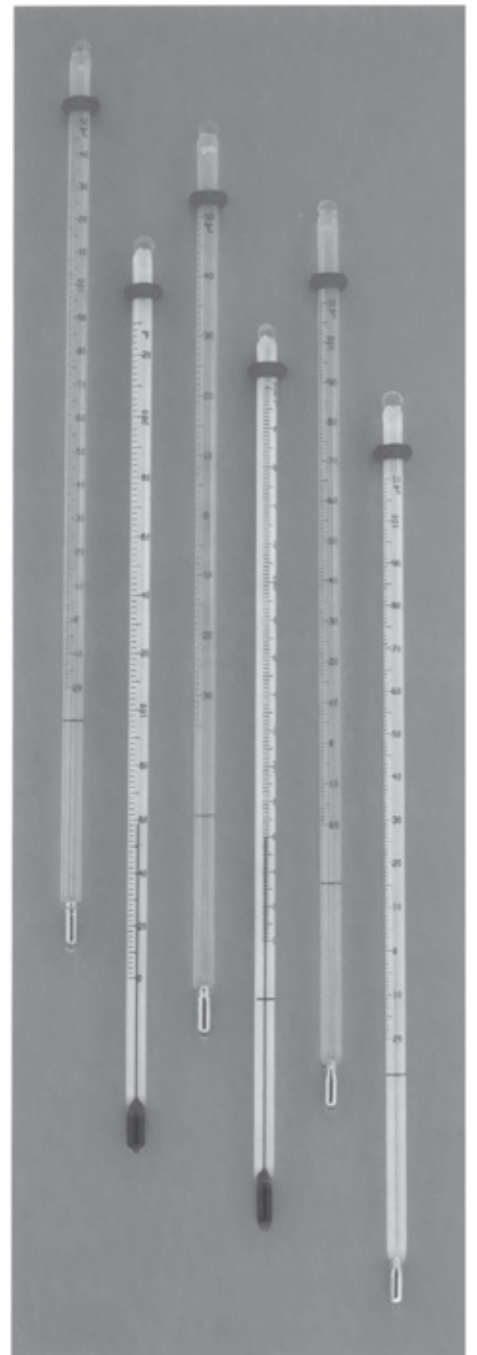


Glass pocket test thermometers

Maximum-Minimum thermometers



General purpose thermometers



## Brannan Thermometers



**General-Purpose Solid Stem Thermometers with WHITE-backed Glass, Mercury Filled,  
Non-roll Fittings, BRANNAN Brand, U. K.**

<b>Cat No.</b>	<b>Range °C</b>	<b>Division °C</b>	<b>Total Length mm</b>	<b>Immersion Length mm</b>	<b>Maximum Price Rs/Pc</b>
40 0018	-35 to 50	1.0	305	76	432.00
40 4010	-10 to 50	0.5	305	76	407.00
40 4030	-10 to 110	1.0	305	76	398.00
40 8030	-10 to 110	0.5	305	76	432.00
40 0038	-20 to 150	1.0	305	76	409.00
40 4080	-10 to 200	1.0	305	76	465.00
40 4100	-10 to 250	1.0	305	76	486.00
40 4120	-10 to 300	1.0	305	76	540.00
40 4140	-10 to 360	2.0	305	76	626.00

**General-Purpose Solid Stem Thermometers with YELLOW-backed Glass, Mercury Filled,  
Non-roll Fittings, BRANNAN Brand, U. K.**

<b>Cat No.</b>	<b>Range °C</b>	<b>Division °C</b>	<b>Total Length mm</b>	<b>Immersion Length mm</b>	<b>Maximum Price Rs/Pc</b>
41 4010	-10 to 50	0.5	305	76	421.00
41 4030	-10 to 110	1.0	305	76	405.00
41 4100	-10 to 250	1.0	305	76	495.00
41 4140	-10 to 360	2.0	305	76	424.00
48 4570	- 1 to 51	0.2	460	76	2266.00
48 4560	- 1 to 101	0.2	460	76	2266.00
48 4550	- 1 to 51	0.1	355	76	2051.00

**Spirit Pocket Test Thermometer with Blue Case and Pen Clip, BRANNAN Brand, U. K.**

<b>Cat No.</b>	<b>Range °C</b>	<b>Maximum Price Rs/Pc</b>
17 7463	- 5 to 105	550.00
17 7462	-10 to 110	550.00
22 7633	-30 to 50	550.00
22 6632	-40 to 40	550.00
22 7733	0 to 40	550.00

# Laboratory Hotplates

Heats, stirs and looks good



## New generation of laboratory hotplates from SI ANALYTICS

Technical data	SLR
Dimensions (W x H x L in mm)	240 x 85 x 370
Glass ceramic area (mm)	235 x 235
Weight (kg)	approx. 3.8
Heated zone (mm)	∅ 155
Voltage (V)	230/240
Power consumption (kW)	0.9
Max. surface temperature (°C)	approx. 600
Min. time to reach boiling point 1 Lt. H <sub>2</sub> O (min.)*	approx. 15
Stirrer	integrated
Min. /max. speed (min <sup>-1</sup> )	100/1100
Max. stirring volume (Lt H <sub>2</sub> O)	20
Temperature control	possible between 25 & 200 °C
Protection system	IP 20
Protection class	1
Admiss. ambient temperature (°C)	10-40
Admiss. humidity (%)	85
Material used for housing	Coated die-cast
Thread for stand fixation	M 8
Cable connection socket	Cold appliances
<b>Cat. No.</b>	<b>28541 6373</b>
<b>Price</b>	<b>On Request</b>

\* Measured with a 3 Lt. glass beaker at 25° C ambient temperature and 1 bar air pressure.

### Numerous good properties in an attractive design

Our new laboratory hotplates have been designed to fulfil the varied and high demands placed upon them by everyday laboratory life, hence they are made to heat, stir and regulate.

The hotplates for these instruments use Schott's glass ceramic CERAN panels, which are known for their tested reliability. Apart from their attractive design, they are distinguished by their excellent chemical resistance and high-grade surface quality as well as excellent thermal properties. It can survive temperature shock of more than 700 °C without any problems whatsoever. The heat is transferred quickly and without loss thanks to the high infrared transparency. Glass ceramic surfaces remain level and are free of pores.

The new generation of hotplates has no open operating elements and also no limiting frame or corners for dirt to collect in. Therefore hotplates by SI ANALYTICS are easy to clean.

### Quality and safety

Naturally the new hotplates are CE certified and have been developed and produced in accordance with the internationally recognised quality standards. The hotplates have a residual heat indicator which warns the user of the danger of injuries. The hotplates cannot overheat, as an excess temperature protection device has been built into every model. The stable casing which is hermetically sealed from above and made of nonflammable Duroplast ensures that the hotplates have long, stable service life without problems. A special stand on the housing makes a safe connection between the laboratory hotplate and additional equipment e.g. thermometers, possible.

### Heating, Stirring & Regulating - SLR

This hotplate enables slow heating, stirring and temperature control.



**Distillation Unit, Single Stage, All Glass, with Silica Heater without Cut-Off System,  
Horizontal Type, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72200 15	Single	Borosilicate	Borosilicate	1.5	1	10667.00
72200 157	Condenser only for above unit					2229.00
72200 155	Boiler only for above unit					5192.00
72200 156	Silica Heater only for above unit					3714.00
72200 200	Auto cut-off system for above unit (Optional)					4830.00

**Note : For Double Stage with above Specifications Price on Request**

**Distillation Unit, Single Stage, All Glass, with Metal Heater, 'O' Ring Type Condenser Fixing arrangement,  
Horizontal Type, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
722210 040	Single without Auto Cut-off	Borosilicate	Borosilicate	4.0	1	17778.00
722210 045	Single with Auto Cut-off	Borosilicate	Borosilicate	4.0	1	22608.00
722210 043	Condenser only for above unit					4459.00
722210 041	Boiler only for above unit					6688.00
722210 042	Metal Heater only for above unit					5943.00
72200 200	Spare Auto cut-off system for above unit					4830.00

**Distillation Unit, Single Stage, All Glass, with Silica Heater and In-Built Cut-Off System with Reset Button  
Horizontal Type, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72211 15	Single	Borosilicate	Borosilicate	1.5	1	22744.00
72201 157	Condenser only for above unit					2229.00
72201 1555	Boiler only for above unit with PT 100 Sensor provision					5192.00
72201 156	Silica Heater only for above unit					3714.00
72211 40	Single	Borosilicate	Borosilicate	4.0	1	31323.00
722210 043	Condenser only for above unit					4459.00
722210 0415	Boiler only for above unit with PT 100 Sensor provision					6688.00
722210 0425	Silica Heater only for above unit					5943.00

**Note : For Double Stage with above Specifications Price on Request**

**Distillation Unit, Double Stage, Lower Boiler with Replaceable Silica Heater, Upper Boiler & Condenser (Quartz),  
In-Built Dual Cut-Off System with Reset Button, Horizontal Model, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler (Lower)	Type of Boiler (Upper)	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72221 415	Double	Quartz	Borosilicate	Quartz	1.5	1	88043.00
72201 1555	Lower Boiler with (Horizontal) PT 100 Sensor Provision				1.5	1	5192.00
72240 0152	Upper Boiler with Condenser (Quartz) only for above unit				1.5	1	66822.00
72201 156	Silica Heater only for above unit					3714.00	
72221 425	Double	Quartz	Borosilicate	Quartz	2.5	1	171570.00
722214 255	Lower Boiler with (Horizontal) PT 100 Sensor Provision				2.5	1	7111.00
72240 0252	Upper Boiler with Condenser (Quartz) only for above unit				2.5	1	144367.00
722214 256	Silica Heater only for above unit					6998.00	



**Distillation Unit, Single Stage, with Borosilicate Boiler & Condenser, Built-in Cut-Off with Reset Button, CABINET TYPE, Horizontal Model, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72212 15	Single	Borosilicate	Borosilicate	1.5	1	31323.00
72201 157	Condenser only for above unit					2229.00
72201 1555	Boiler only for above unit with PT 100 Sensor provision					5192.00
72201 1566	Silica Heater only for above unit					3714.00
72212 40	Single	Borosilicate	Borosilicate	4.0	1	42441.00
722210 043	Condenser only for above unit					4459.00
722210 0415	Boiler only for above unit with PT 100 Sensor provision					6688.00
722210 0426	Silica Heater only for above unit					5943.00

**Distillation Unit, Double Stage, with Borosilicate Boiler & Condenser, Built-in Cut-Off with Reset Button, CABINET TYPE, Horizontal Model, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72213 15	Double	Borosilicate	Borosilicate	1.5	1	63210.00
72201 157	Condenser only for above unit					2229.00
72201 1555	Boiler only for above unit with PT 100 Sensor provision					5192.00
72201 1566	Silica Heater only for above unit					3714.00
72213 40	Double	Borosilicate	Borosilicate	4.0	1	85785.00
722210 043	Condenser only for above unit					4459.00
722210 0415	Boiler only for above unit with PT 100 Sensor provision					6688.00
722210 0426	Silica Heater only for above unit					5943.00

**Distillation Unit, Single Stage, All Quartz, with Built-in Quartz Heater, Vertical Panel Mounted, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72220 10	Single	Quartz	Quartz	1.0	1	32677.00
72220 105	Boiler only for above unit					13376.00
72220 106	Condenser only for above unit					14843.00
72220 20	Single	Quartz	Quartz	2.0	1	37136.00
72220 205	Boiler only for above unit					17823.00
72220 206	Condenser only for above unit					17823.00
72220 30	Single	Quartz	Quartz	3.0	1	51923.00
72220 305	Boiler only for above unit					19302.00
72220 306	Condenser only for above unit					27474.00
72220 40	Single	Quartz	Quartz	4.0	1	63154.00
72220 405	Boiler only for above unit					24494.00
72220 406	Condenser only for above unit					40855.00
72220 50	Single	Quartz	Quartz	5.0	1	74272.00
72220 505	Boiler only for above unit					32169.00
72220 506	Condenser only for above unit					42808.00



**Distillation Unit, Single Stage, with Quartz Boiler, Borosilicate Condenser & Built-in Quartz Heater,  
Vertical Panel Mounted, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72230 010	Single	Borosilicate	Quartz	1.0	1	19189.00
72230 110	Boiler, Quartz only for above unit			1.0	1	13376.00
72230 210	Condenser, Borosilicate only for above unit			1.0	1	1862.00
72230 020	Single	Borosilicate	Quartz	2.0	1	21446.00
72230 120	Boiler, Quartz only for above unit			2.0	1	17823.00
72230 220	Condenser, Borosilicate only for above unit			2.0	1	1862.00
72230 030	Single	Borosilicate	Quartz	3.0	1	23873.00
72230 130	Boiler, Quartz only for above unit			3.0	1	19302.00
72230 230	Condenser, Borosilicate only for above unit			3.0	1	2229.00
72230 040	Single	Borosilicate	Quartz	4.0	1	32169.00
72230 140	Boiler, Quartz only for above unit			4.0	1	24494.00
72230 240	Condenser, Borosilicate only for above unit			4.0	1	2969.00
72230 050	Single	Borosilicate	Quartz	5.0	1	36120.00
72230 150	Boiler, Quartz only for above unit			5.0	1	32169.00
72230 250	Condenser, Borosilicate only for above unit			5.0	1	2969.00

**Distillation Unit, Double Stage, with Quartz Boiler, Quartz Condenser & Built-in Quartz Heater,  
Vertical Panel Mounted, RIVIERA**

Cat No.	Type	Type of Condenser	Type of Boiler	Output Ltrs. / Hr	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72240 010	Double	Quartz	Quartz	1.0	1	69983.00
72240 011	Lower Boiler, Quartz only for above unit			1.0	1	14854.00
72240 012	Upper Boiler with Condenser, Quartz only for above unit			1.0	1	53446.00
72240 015	Double	Quartz	Quartz	1.5	1	80141.00
72240 0151	Lower Boiler, Quartz only for above unit			1.5	1	18568.00
72240 0152	Upper Boiler with Condenser, Quartz only for above unit			1.5	1	66822.00
72240 020	Double	Quartz	Quartz	2.0	1	98201.00
72240 021	Lower Boiler, Quartz only for above unit			2.0	1	20035.00
72240 022	Upper Boiler with Condenser, Quartz only for above unit			2.0	1	72184.00
72240 025	Double	Quartz	Quartz	2.5	1	104974.00
72240 0251	Lower Boiler, Quartz only for above unit			2.5	1	22293.00
72240 0252	Upper Boiler with Condenser, Quartz only for above unit			2.5	1	80141.00
72240 030	Double	Quartz	Quartz	3.0	1	121905.00
72240 031	Lower Boiler, Quartz only for above unit			3.0	1	24494.00
72240 032	Upper Boiler with Condenser, Quartz only for above unit			3.0	1	88212.00
72240 040	Double	Quartz	Quartz	4.0	1	178230.00
72240 041	Lower Boiler, Quartz only for above unit			4.0	1	40099.00
72240 042	Upper Boiler with Condenser, Quartz only for above unit			4.0	1	144367.00
72240 050	Double	Quartz	Quartz	5.0	1	208819.00
72240 051	Lower Boiler, Quartz only for above unit			5.0	1	44557.00
72240 052	Upper Boiler with Condenser, Quartz only for above unit			5.0	1	160283.00

**Riviera** Water Distillation Units



**Cat. No. 72210 040**



**Cat. No. 72240 Series**



**Cat. No. 72230 Series**

**Riviera** Water Distillation Units



**Cat. No. 72260 000**



**Cat. No. 72221 Series**



**Cat. No. 72211 Series**



**Cat. No. 72212 Series**





#### OPTIONAL ACCESSORIES FOR DISTILLATION UNITS

Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72250 000	Auto Cut-Off System with Audio Alarm Suitable for capacities up to 2.5 ltr/hr	1	11282.00
72250 100	Auto Cut-Off System with Audio Alarm Suitable for capacities above 2.5 ltr/hr	1	19189.00
72260 000	Water Softner for Boiler Feed	1	11282.00
72260 001	Resin for Water Softner	1	2625.00
72260 500	DM Plant	1	27654.00

#### Warranty Clause for Riviera Distillation Units:

The above equipment is warranted with following conditions:

- The items supplied will carry a warranty of 12 months from the date of the invoice against manufacturing defects. The company will repair or replace the parts going defective free of cost during the warranty period. Vacuumatic items and consumables like bulb, fuse, heater, battery, etc. are not covered under warranty.
- Glass parts do not carry any warranty after installation.
- Complaints arising out of mishandling willful or through ignorance, negligence or resulting from accidents, attempted repairs, and inadequate power supply, fluctuation in voltage, general wear and tear are not covered under this warranty.
- Complaints should be communicated to the warrantor in writing.

#### All Glass Filter Flask for Filter Holder 47mm

Excellent suitability for vacuum filtration of liquids for analysis, especially suitable for HPLC set up, both solvent and mobile phases. Very good compatability with chemicals including very aggressive solvents - all parts made of borosilicate glass.

#### Specifications :

Filter size : 47mm dia.

Effective Filtration area : 9.60 cm<sup>2</sup>

Filter flask capacity : 1000 ml

Funnel capacity : 300 ml

Spring clamp : Anodised Aluminium

Pressure : Vacuum only

Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73200 544	Complete set <b>Parts only</b>	1	11324.00
73200 504	Flask for all glass filter holder 47mm	1	3562.00
73200 502	Funnel for all glass filter holder 47mm	1	2678.00
73200 503	Filter base for all glass filter holder 47mm	1	3748.00
73200 501	Clamp	1	1338.00



### Portable, Oil-Free Vacuum Pump, Rivotek

Excellent suitability for HPLC & Filtration applications. Supplied complete with Vacuum Gauge & Regulator.



#### Salient Features :

- No Lubrication required
- Noiseless performance
- Light weight & portable
- Oil-free construction
- Practically maintenance free
- All parts manufactured from special graded Aluminium die cast material
- Diaphragms made of special 2-ply Nylon reinforced Neoprene Rubber
- TEFLON, VITON & other special diaphragms available on request at extra cost

- Valves made of SS316
- Built-in micro suction filter
- Extra large bearings for smooth trouble free operation

#### Applications :

- Laboratories
- Pollution Control Equipments
- Medical Instruments
- Dentistry
- Chemical Analysers
- Suction Apparatus

Cat No.	Max Flow Lrs./min	Max Vacuum Inches of Hg	Max Pressure Psi	Approx. Weight Kg	Motor HP	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21202 500	15	27	35	4.10	1/16	1	10850.00

Pumps with various capacities and specifications available. Please contact us for detailed specifications and price.

### Glass Filter Holder 47mm

Excellent suitability for microbiological application.



#### Specifications :

- Filter size : 47mm dia.
- Effective Filtration area : 9.60 cm<sup>2</sup>
- Filter flask capacity : 1000 ml
- Funnel capacity : 300 ml
- Spring clamp : Anodised Aluminium
- Stopper - Perforated - Neoprene

Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73210 444	Complete set	1	9885.00
	<b>Parts only</b>		
73210 413	Flask for all glass filter holder 47mm	1	3185.00
73210 412	Funnel for all glass filter holder 47mm	1	2677.00
73210 414	Filter base for all glass filter holder 47mm complete with Neoprene Stopper	1	2677.00
73210 411	Clamp	1	1337.00
73210 415	Perforated Neoprene Stopper only	1	259.00

### Glass Filter Holder 25mm

Excellent suitability for microbiological application.

#### Specifications :

- Filter size : 25mm dia.
- Filter flask capacity : 125 ml
- Funnel capacity : 15 ml
- Spring clamp : Anodised Aluminium
- Stopper - Perforated - Neoprene

Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73220 224	Complete set	1	5844.00
	<b>Parts only</b>		
73220 213	Flask for filter holder 25mm	1	1250.00
73220 212	Funnel for filter holder 25mm	1	1428.00
73220 214	Filter base for filter holder 25mm complete with Neoprene Stopper	1	2143.00
73220 211	Clamp	1	1027.00
73220 215	Perforated Neoprene Stopper only	1	259.00



## MEMBRANE FILTERS

**Riviera Membrane Filters are ideal to serve the industries which desire fine filtration. These Membrane Filters are used extensively for removal of particulate, bacteria and virus' from liquids as well as from air**

### Cellulose Nitrate Membrane Filter - Type RCN, RIVIERA

Cellulose Nitrate Membrane Disc filters are hydrophilic, non-media migrating, biologically inert, plain white absolute membrane filter available in wide range of pore size from 0.22µm to 0.80 µm.

#### Features and Benefits :

- Absolute Retention
- High Flow rates
- Narrow pore size distribution
- Low extractable levels

#### Applications :

- Sample Preparations
- Microbiological studies
- Filtration of Aqueous solution.

#### Specifications :

- Retention Efficiency: 0.22 µm : LRV > 7 for Br. diminuta
- Sterilisation: Autoclavable at 121°C
- Maximum Operating Temp: 80°C continuous
- Maximum Operating Pressure: 5 kg/cm<sup>2</sup>
- Bio safety: Passes the Biological tests for Class VI plastics as described in USP.
- Oxidizable Matter: Passes as per USP.

### Integrity Test Data

Pore size µm	Wetting Fluid	Bubble Point		Water Flow Rate ml/min/cm <sup>2</sup> at ΔP=10psi at 20°C
		psi	kg/cm <sup>2</sup>	
0.22	Water	52	3.65	20
0.45	Water	33	2.32	46
0.80	Water	14	0.98	259

Cat No.	Porosity µm	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75400 4722	0.22	47	100	10	1021.00
75400 4745	0.45	47	100	10	1021.00
75400 4780	0.80	47	100	10	1021.00

### Cellulose Nitrate Membrane Filter, GRIDDED - Type RGCN, RIVIERA

RGCN membranes are made of cellulose nitrate, a material which assures effective retention with high flow rates. These membranes are useful for water microbiology. A grid is printed on the surface to facilitate colonies.

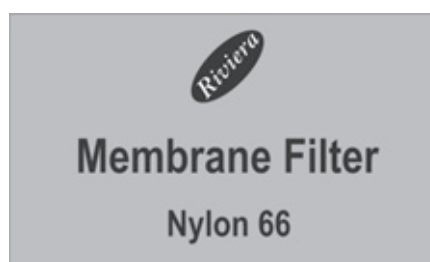
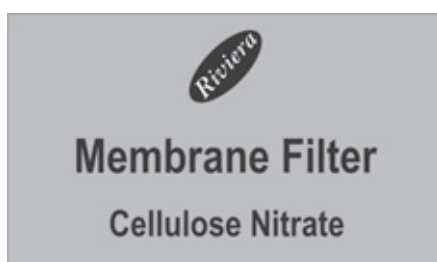
#### Features and Benefits :

- High Flow rates.
- Non inhibiting ink grids.
- Validated for microbial recovery.

#### Applications :

- RGCN membranes are useful for water microbiology. The printed grid eases the counting of bacterial colonies, micro colonies etc, and in no way influences the growth of bacteria.

Cat No.	Porosity µm	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75600 4722	0.22	47	100	10	1814.00
75600 4745	0.45	47	100	10	1814.00
75600 4780	0.80	47	100	10	1814.00





**Nylon - 66 Membrane Filter - Type RN, RIVIERA**

Nylon membrane disc filter are double layered hydrophilic, non media migrating, biologically inert, flexible, durable, plain white absolute membrane filter offering wide chemical compatibility.

**Features and Benefits :**

- Absolute Retention
- Wide chemical compatibility
- Not extractable
- High heat resistance
- Base of handling

**Specifications :**

- Retention Efficiency: 0.22  $\mu\text{m}$  : LRV > 7 for Br. diminuta
- Sterilisation: Autoclavable at 121°C
- Maximum Operating Temp: 80°C continuous
- Maximum Operating Pressure: 5 kg/cm<sup>2</sup>
- Bio safety: Passes the Biological tests for Class VI plastics as described in USP.
- Oxidizable Matter: Passes as per USP.

**Integrity Test Data**

Pore size $\mu\text{m}$	Wetting Fluid	Bubble Point		Water Flow Rate ml/min/cm <sup>2</sup> at $\Delta\text{P}=10\text{psi}$ at 20°C
		psi	kg/cm <sup>2</sup>	
0.22	Water	52	3.65	14.5
0.45	Water	33	2.32	38.5
0.80	Water	14	0.98	125

Cat No.	Porosity $\mu\text{m}$	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75500 4722	0.22	47	100	10	1588.00
75500 4745	0.45	47	100	10	1588.00
75500 4780	0.80	47	100	10	1588.00

**Edge Hydrophobic Membrane Disc Filter, - Type REHCN, RIVIERA**

REHCN Membranes are used for sterility testing of antibiotics & drugs containing bacteriostats. 6 mm rim is hydrophobic and rest of the membrane is hydrophilic. The hydrophobic edge does not allow drug to seep under the rim of the filter holder. This ensures complete removal of the drug during flushing so that growth of any micro-organisms which have been retained on the membrane is not inhibited due to the residual drug, improving the sensitivity and reliability of the test.

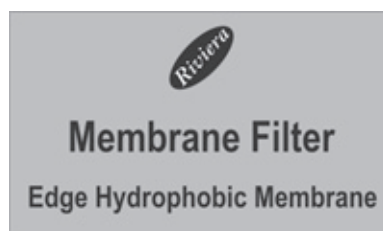
**Specifications :**

- Sterilisation: Autoclavable at 121°C
- Maximum Operating Temp: 80°C continuous
- Maximum Operating Pressure: 5 kg/cm<sup>2</sup>
- Bio safety: Passes the Biological tests for Class VI plastics as described in USP.
- Oxidizable Matter: Passes as per USP.

**Integrity Test Data**

Pore size $\mu\text{m}$	Wetting Fluid	Bubble Point		Water Flow Rate ml/min/cm <sup>2</sup> at $\Delta\text{P}=10\text{psi}$ at 20°C
		psi	kg/cm <sup>2</sup>	
0.45	Water	33	2.32	46

Cat No.	Porosity $\mu\text{m}$	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75700 4745	0.45	47	100	10	3176.00





## Chemical Compatibility

Table below shows the chemical compatibility of various laboratory filtration products with some commonly used solvents. All products were exposed to specified chemicals for 72 hours at 25°C.

Reagents	Cellulose Nitrate	Nylon 66
<b>Solvents</b>		
Acetone	N	G
Acetonitrile	N	G
Benzene	G	G
Benzyl Alcohol	N	G
Benzyl Alcohol 4%	F	G
Diethyl Ether	N	G
Dimethyl Formamide	N	G
Ethyl Acetate	N	G
Ethylene Glycol	N	G
Hexane	G	G
Iso Propyl Alcohol	G	G
Methanol	N	G
Methylene Chloride	G	G
n-Butanol	G	G
Peanut Oil	G	G
Tetrahydrofuran/water(50:50)	N	G
Toluene	F	G
Trichloroethylene	G	G
<b>Acids</b>		
Hydrochloric Acid 37%	N	N
Hydrochloric Acid 10 %	G	G
Nitric Acid 67%	N	N
Nitric Acid 7%	G	G
Sulphuric Acid 10%	G	G
<b>Bases</b>		
Ammonium Hydroxide 25%	N	G
Sodium Hydroxide 32%	N	G
Potassium Hydroxide 32%	N	N

**G** : Good, **N** : Not recommended, **F** : Fair

ISO 9001  
CERTIFIED

HIRSCHMANN  
**EM**  
TECHCOLOR  
Europa Marke

HIRSCHMANN®  
LABORGERÄTE  
Germany

# solarus®

## HiClass Titration.



Sunshine  
Power

# solarus®

## The sunshine in your lab.

solarus®, Hirschmann Laborgerate's new digital burette sets new standard in manual titration.

**Revolutionary:** The integrated solar panels supply the energy from the electronic components to the display, i.e. no more charging or changing batteries.

**Additional advantage:** The serial bi-directional interface (RS 232) for taking down the performed titrations, further processing of the titration data and input of the user-specific calibration factor.

solarus® replaces ideally any breakable glass burette or high end titration automates, if they are too expensive. It needs only a small space and absolutely no power connection. Meniscus reading errors are prevented to a 100% with the clear digital display.

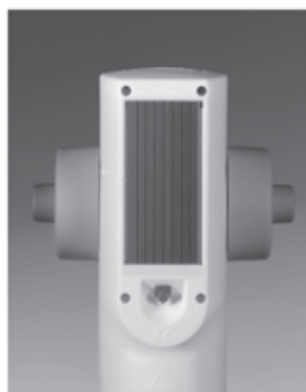
The serial reagent recirculation system makes priming the unit much easier, prevents the loss of expensive reagents and is easy on the environment.

Exchangeable valves, simple user-specific calibration "Quick Cal" and the permanently stored default calibration make individual adaptations possible.

solarus® is available in 20 ml and 50 ml versions.

The modern and ergonomical design makes routine titration work much easier, or to put it simply: Titration as perfect as it could be.

solarus®: The brilliant synthesis of esthetics and function.



solarus®,

### Unlimited power.

The most important accessory is invaluable. But you get it free: Solar Energy

The solar panels on the back of the solarus® supply the energy needed for the electronic components of the device. Charging or changing batteries, high standby costs and the impractical exchange of Lithium cells of the factory belong to the past.

**Enjoy the advantages of solar technology instead. Convenient, simple, environmentally friendly, inexhaustible and free.**

Even with limited lighting conditions, a reliable energy supply is secured by using high-graded solar panels.



### Precision is the key.

The hand wheel is equipped with a softtouch surface which guarantee maximum grip and together with the smoothly operating gear provide very sensitive titration.

### An intelligent head

Clear, self-explaining and user-friendly. The display is always clearly readable, regardless of the angle of view, volume range 0.01 ml -99.99 ml. The turning direction Fill or Titrate is indicated by arrows and the operation of the keys is obvious. The result: correct volumes and error free readings, even for very sensitive titrations.



### Quick-Cal

Makes individual calibration possible for user-specific adaptations. By merely touching a button the device switches from the default calibration to the user-specific calibration and back at any time.



### Easy on the environment and your budget

The user-friendly Hirschmann reagent recirculation system primes the device fast and without unnecessary loss of reagent



### Rotate 360 degrees

An important detail for the daily lab work: you can turn solarus® freely on the bottle. The advantage: labels or lettering on the bottle always face the user. Hence you have everything right before you.

### Connection to the future

The serial bi-directional interface permits the user to report titration results and to process data further. An individual calibration factor may also be entered. A suitable connecting cable is available as an accessory.

### Test samples are good. Individual tests are better.

Each solarus®, is individually tested for accuracy. The individual test certificate indicates the tested values as well as the individual serial number and certifies the conformity with the German "Eichordnung". It can therefore also be accepted as part of the quality documentation in conjunction with the DIN EN ISO 9000 standard.



Product fulfils all requirements of the EC-guidelines and it has been tested in accordance to the laid down procedures

## Technical data

Titration steps	10 µl
Volume range	0.01 ml to 99.99 ml
Volume accuracy	precise and reproducible with absolute accuracy (R) 0.2% and standard deviation (CV) 0.1%
Piston	Teflon-compound ECTFE, PTFE
Cylinder	predominantly inert and wear-free, made of calibrated DURAN glass
Valves	predominantly inert and wear-free, ball and seat are made of borosilicate glass, valve spring of Hastelloy. The valves are easily dismantled and exchangeable with a wrench (supplied with each solarus®)
Plastic components	all components which come into contact with media are manufactured from highly inert flourine plastics: valve block and valve housing are made of ECTFE, suction tube and dispensing tube are made of FEP
Sterilization	all components which come into contact with media, including the discharge unit, are steam sterilizable (121°C)
Breakage resistance	completely closed protective mantle, made of plastics, with a clear view glass, protects against breakage
Test documentation	every solarus® is individually tested and certified with an individual serial number

## Accessories

	cat. no.	
interface connection cable	956 40 05	Prices on request
discharge unit, spiral shaped	931 30 27	Prices on request
software for data transfer	956 40 10	Prices on request



**Burette, Digital, Solar Powered, Conformity certified, with Individual Work Certificate, High Precision Digital Titrator for exact and error - free Titration, SOLARUS.**

The unit will be supplied complete with mounted discharge unit and A45 female thread. 3 different adapters (A 32, A 30 & A 40), suction tube, return tube and wrench.

Cat No.	Capacity ml	Accuracy $R \leq \pm$ %	Reproducibility $CV \leq$ %	Qty. Per Pack Pcs	Maximum Price Rs/Pc
93920 20	20	0.2	0.1	1	79881.00
93920 50	50	0.2	0.1	1	79881.00

**LABOPETTOR, Fixed Volume, Conformity Certified with Individual Work Certificate, EM-TECHCOLOR Brand**

Cat No.	Volume $\mu$ l	Accuracy $R \leq \pm$ %	Reproducibility $CV \leq$ %	Qty. Per Pack Pcs	Maximum Price Rs/Pc
94755 01	5	2.5	1.5	1	10564.00
94755 02	10	1.2	0.8	1	10564.00
94755 03	20	1.0	0.5	1	10564.00
94755 04	25	1.0	0.5	1	10564.00
94755 05	50	1.0	0.4	1	10564.00
94755 06	100	0.8	0.3	1	10564.00
94755 07	200	0.8	0.3	1	10564.00
94755 08	250	0.8	0.3	1	10564.00
94755 09	500	0.8	0.3	1	10564.00
94755 10	1000	0.8	0.3	1	10564.00
94755 11	2000	0.8	0.3	1	10564.00
94755 12	5000	0.8	0.3	1	10564.00
94755 13	10 ml	0.6	0.3	1	10564.00



**LABOPETTOR, Variable Volume, Conformity Certified with Individual Work Certificate, EM-TECHCOLOR Brand**

Cat No.	Volume $\mu$ l	Volume Division $\mu$ l	Accuracy $R \leq \pm$ %	Reproducibility $CV \leq$ %	Qty. Per Pack Pcs	Maximum Price Rs/Pc
94754 00	0.1 - 3	0.002	4.0	2.0	1	14580.00
94754 01	0.5 - 10	0.01	1.2	0.8	1	14580.00
94754 06	2 - 20	0.02	1.0	0.5	1	14580.00
94754 07	10 - 100	0.1	0.8	0.3	1	14580.00
94754 08	20 - 200	0.2	0.8	0.3	1	14580.00
94754 09	100 - 1000	1.0	0.8	0.3	1	14580.00
94754 05	500 - 5000	10.0	0.8	0.3	1	14580.00
94754 04	1 - 10 ml	20.0	0.6	0.3	1	14580.00

**LABOPETTOR, Variable Volume, Multi Channel, Conformity Certified with Individual Work Certificate, EM-TECHCOLOR Brand**

Cat No.	No. of Channels	Volume $\mu$ l	Volume Division $\mu$ l	Accuracy $R \leq \pm$ %	Reproducibility $CV \leq$ %	Qty. Per Pack	Maximum Price Rs/Pc
94756 01	8	0.5 - 10	0.01	2.4	1.6	1	66825.00
94756 02	8	10 - 100	0.1	1.6	0.6	1	66825.00
94756 04	8	30 - 300	0.2	1.6	0.6	1	66825.00
94757 01	12	0.5 - 10	0.01	2.4	1.6	1	79418.00
94757 02	12	10 - 100	0.1	1.6	0.6	1	79418.00
94757 04	12	30 - 300	0.2	1.6	0.6	1	79418.00



**PIPETUS - Pipetting Device for All Conventional Glass Pipettes, EM-TECHCOLOR Brand**

Cat No.	Equipment Type	Operating Principle	Operating Range ml	Accessories Supplied	Qty. Per Pack Pcs	Maximum Price Rs/Pc
99020 00	Junior	Manual	0.5 - 10		1	10574.00
99030 00	Standard	Electrical	0.1 - 100	Elect. Pump	1	25979.00
99072 00	Akku	Electrical	0.1 - 100	Bat. Charger	1	43799.00







**Bottle Top Liquid Dispenser, with Ceramic Piston, Fixed Volume, Autoclavable at 121° C, 2 Bar, Conformity Certified, with Individual Number & Work Certificate, CERAMUS - CLASSIC FIX**  
Equipment shall be supplied complete with Thread A 32 mm, 3 thread adapters (A 28, S 40 & A 45), 1 screw coupled suction tube and 1 discharge tube unit complete

Cat No.	Volume ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
93111 00	1	1	20448.00
93211 00	2	1	20448.00
93311 00	5	1	20448.00
93411 00	10	1	20448.00
93511 00	25	1	26561.00
93611 00	50	1	28796.00



**Bottle Top Liquid Dispenser, with Ceramic Piston, Variable Volume, Autoclavable at 121° C, 2 Bar, Conformity Certified, with Individual Number & Work Certificate, CERAMUS - CLASSIC**  
Equipment shall be supplied complete with Thread A 32 mm, 3 thread adapters (A 28, S 40 & A 45), 1 screw coupled suction tube and 1 discharge tube unit complete.

Cat No.	Volume ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
93100 00	0.2 - 1	1	21077.00
93200 00	0.4 - 2	1	21077.00
93300 00	1.0 - 5	1	21077.00
93400 00	2.0 - 10	1	21077.00
93500 00	5.0 - 30	1	27560.00
93600 00	10.0 - 60	1	30054.00

**Bottle Top Liquid Dispenser, Variable Volume, with Ceramic Piston & Reagent recirculation system, Autoclavable at 121° C, 2 Bar, Conformity Certified, with Individual Number & Work Certificate, CERAMUS®**  
Equipment shall be supplied suitable for A 45 mm Thread, 3 thread adapters (A 32, S 40 & A 38), 1 screw coupled suction tube, recirculation tube, spanner and 1 discharge tube unit complete.

Cat No.	Volume ml	Volume Division ml	Accuracy R%	Reproducibility CV%	Qty. Per Pack Pcs	Maximum Price Rs/Pc
93120 00	0.2 - 1	0.05	0.6	0.2	1	26766.00
93220 00	0.4 - 2	0.05	0.5	0.1	1	26766.00
93320 00	1 - 5	0.10	0.5	0.1	1	26766.00
93420 00	2 - 10	0.25	0.5	0.1	1	26766.00
93520 00	5 - 30	0.50	0.5	0.1	1	29000.00
93620 00	10 - 60	1.00	0.5	0.1	1	31054.00



**Ceramus-Classic**  
*with unrivalled  
ceramic piston*



**ceramus<sup>®</sup>**  
*dispensing as perfect  
as it could be*





pipetus® - family





**MICROPIPETTES, Fixed Volume, Single Channel, with Individual Work Certificate, RIVIERA**

Recalibration required after each Autoclaving. Colour coded for easy identification. Calibration conforming to DIN 12650 & EN-ISO 8655 standards ensuring high accuracy & precision. Calibration report with every pipette.

Cat No.	Volume $\mu$ l	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77201 01	5	1	1971.00
77201 02	10	1	1971.00
77201 03	20	1	1971.00
77201 04	25	1	1971.00
77201 05	50	1	1971.00
77201 06	100	1	1971.00
77201 07	200	1	1971.00
77201 08	250	1	1971.00
77201 09	500	1	1971.00
77201 10	1000	1	1971.00
77201 11	2000	1	2577.00
77201 12	5000	1	2577.00



**MICROPIPETTES, Variable Volume, Single Channel, with Individual Work Certificate, RIVIERA**

Recalibration required after each Autoclaving. Colour coded for easy identification. Calibration conforming to DIN 12650 & EN-ISO 8655 standards ensuring high accuracy & precision. Calibration report with every pipette.

Cat No.	Volume $\mu$ l	Volume Division $\mu$ l	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77301 01	0.5 - 10	0.1	1	3608.00
77301 02	5 - 50	0.5	1	3608.00
77301 03	50 - 200	1.0	1	3608.00
77301 04	200 - 1000	5.0	1	3608.00
77301 05	10 - 100	0.5	1	3608.00
77301 06	100 - 1000	5.0	1	3608.00
77301 07	2 - 20	0.1	1	3608.00
77301 08	20 - 200	1.0	1	3608.00
77301 09	1000 - 5000	50.0	1	4214.00

**Plastic Stand for Micro Pipettors**

Cat No.	To Hold No. of Micro Pipettor	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77500 001	4	1	1789.00
77500 002	6	1	2122.00





**MICROPIPETTES, Fixed Volume, Single Channel, Fully Autoclavable, with Individual Work Certificate, RIVIERA +**

Does not require recalibration after Autoclaving. Fully Autoclavable since material of construction of body is high grade engineering plastics. Colour coded for easy identification. Calibration conforming to DIN 12650 & EN-ISO 8655 standards ensuring high accuracy & precision. Calibration report with every pipette.

Cat No.	Volume $\mu$ l	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77200 01	5	1	3062.00
77200 02	10	1	3062.00
77200 03	20	1	3062.00
77200 04	25	1	3062.00
77200 05	50	1	3062.00
77200 06	100	1	3062.00
77200 07	200	1	3062.00
77200 08	250	1	3062.00
77200 09	500	1	3062.00
77200 10	1000	1	3062.00
77200 11	2000	1	3669.00
77200 12	5000	1	3669.00



**MICROPIPETTES, Variable Volume, Single Channel, Fully Autoclavable, with Individual Work Certificate, RIVIERA +**

Does not require recalibration after Autoclaving. Fully Autoclavable since material of construction of body is high grade engineering plastics. Colour coded for easy identification. Calibration conforming to DIN 12650 & EN-ISO 8655 standards ensuring high accuracy & precision. Calibration report with every pipette.

Cat No.	Volume $\mu$ l	Volume Division $\mu$ l	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77300 01	0.5 - 10	0.1	1	4699.00
77300 02	5 - 50	0.5	1	4699.00
77300 03	50 - 200	1.0	1	4699.00
77300 04	200 - 1000	5.0	1	4699.00
77300 05	10 - 100	0.5	1	4699.00
77300 06	100 - 1000	5.0	1	4699.00
77300 07	2 - 20	0.1	1	4699.00
77300 08	20 - 200	1.0	1	4699.00
77300 09	1000 - 5000	50.0	1	5306.00

**Plastic Micro-Pipette Tips, Universal Type**

Cat No.	Capacity Range $\mu$ l	Compatible with Micro-Pipette	Qty per Pack	Packs per Box	Maximum Price Rs/Pack
77400 001	0.5 - 20	77301 01, 77301 07, 77300 01, 77300 07 77200 01, 77200 02, 77200 03, 77201 01 77201 02, 77201 03	1000	10	531.00
77400 002	0.5 - 200	77200 04, 77200 05, 77200 06, 77200 07 77300 02, 77300 03, 77300 05, 77300 08 77201 04, 77201 05, 77201 06, 77201 07 77301 02, 77301 03, 77301 05, 77301 08	1000	10	347.00
77400 003	100 - 1000	77200 08, 77200 09, 77200 10, 77300 04 77300 06, 77201 08, 77201 09, 77201 10 77301 04, 77301 06	500	10	335.00
77400 004	1000 - 5000	77200 11, 77200 12, 77300 09, 77201 11 77201 12, 77301 09	200	2	774.00



## Pipette Controller - RIVIERA



### Main Features

- ✓ Easy to use Operating Knobs
- ✓ Powerful Pump
- ✓ Double Safety Valve and Hydrophobic Filters
  - Just 4 seconds to fill a 25ml Pipette
  - No fluid penetration ensured by Double Safety Valve and Hydrophobic Filters
  - Fast and Slow Speed modes
  - Excellent Control of Speed through finger pressure control
  - Low Battery Indicator
  - Power through Cadmium free Batteries - Environment friendly – 2 x 1.2V/1000mAh NiMH batteries. Can be used continuously for 8 hrs. Battery Charging 2-3 hrs.
  - Range of Pipette volume from 0.1 ml to 200ml

### Accessories available with the Controller

- ✓ Battery Charger
- ✓ Hydrophobic PTFE membrane filter 0.45  $\mu\text{m}$  1pc
- ✓ Hydrophobic PTFE membrane filter 0.20  $\mu\text{m}$  1pc
- ✓ Wall mounting stand with screw

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### Pipette Controller, RIVIERA

Cat No.	Equipment Type	Operating Principle	Operating Range ml	Accessories Supplied	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77510 000	Pipette Controller	Electrical	0.1 - 200	As above	1	9875.00

# Economy to Deluxe **BENCH METERS** To Suit Your Pocket pH / mV / Conductivity / TDS / °C / °F



Solution  
*For* Your Laboratory  
To Work Better, **FASTER!**

## **CyberScan pH 510**

pH / ORP / Temperature

A Eutech favourite! – the user-friendly pH 510 allows users to switch from pH to mV readings and comes with a pH and temperature probe for general-purpose measurements. Analog recorder output allows easy transfer of readings to external chart-recording devices and into hardcopies. The CyberScan pH 510 is value for money and ideal for routine use in schools, laboratories and production plants.

- Dual display shows pH (or mV) and temperature readings
- Quick, easy calibration with no mistakes – up to 5-point push button calibration with auto-buffer recognition
- Non-volatile memory stores up to 100 data sets
- Self-diagnostic messages



## **Calibration Solutions with Certificate of Analysis**

Wide range of calibration solutions for pH, Conductivity, Salinity, TDS and ORP is available with Eutech. Calibration solutions come in a convenient ready to use 480 ml leak-proof bottles. Calibration must be done on regular basis for maintaining accuracy of the instrument. It also helps negate the effect of electrode ageing and contamination.

NIST-traceable sachets for quick, accurate and convenient calibrations are provided. Simply insert electrode into sachet pack, calibrate, rinse and discard sachet – no separate container needed!



**EUTECH**  
INSTRUMENTS  
*Technology Made Easy...*

# CyberScan CON 510

## Conductivity / Total Dissolved Solids / Temperature

The CyberScan CON 510 offers high precision and stability for years of reliable performance. With selectable cell constant and auto-ranging across 5 ranges, the CON 510 is an affordable bench meter that provides accurate, consistent measurement of conductivity

- Adjustable TDS factor for more accurate results
- Quick, easy calibration with no mistakes – up to 5-point push button calibration
- Single point or multi point calibration options
- Auto-ranging for fast response with high resolution
- Electrode comes with in-built ATC function, and is designed for minimal air bubble entrapment during measurement
- Non-volatile memory stores up to 50 data sets



Slide-Out  
Instruction Card  
For quick,  
convenient referencing



Non-Skid Pads  
Hold meter  
steady during  
operation



## CyberScan PC 510 pH / ORP / Conductivity / Total Dissolved Solids / Temperature

A real value-for-money, the CyberScan PC 510 offers measurements in pH, conductivity, TDS, and temperature, all in one single meter. Incorporating signature user-friendly features typical to the CyberScan 510 series, this multi-parameter meter is a must-have in your laboratory!

- Analog recorder output for convenient documentation of results with any chart-recording device
- Quick, easy calibration with no mistakes - up to 5 - point push button calibration with auto - buffer recognition
- Adjustable TDS factor for more accurate results
- Selectable automatic / manual temperature compensation for optimum accuracy under varying temperatures
- Conductivity / TDS electrode comes with in-built ATC function, and is designed for minimal air bubble entrapment during measurement

>> Geological & Ecological Testing

>> Cooling Tower





<< Sewage Treatment





<< Pharmaceutical Industries





Conductivity & Multi-parameter Bench Meters		ECCON510435	ECPCS10435
			
Conductivity	Range	0 to 19.99, 199.9, 1999 µS/cm ; 19.99, 199.9 mS/cm	
	Resolution	0.01, 0.1, 1 µS/cm ; 0.01, 0.1 mS/cm	
	Accuracy	± 1 % Full scale + 1 digit	
	Calibration	Up to 4 points (auto calibration), up to 5 points (manual)	
TDS	Range	0.0 to 9.99, 99.9, 999 ppm ; 9.99, 99.9 ppt (Max. of 199.9 based on factor setting)	
	Resolution	0.01, 0.1, 1 ppm ; 0.01, 0.1 ppt	
	Accuracy	± 1 % Full scale + 1 digit	
	Calibration	5 Points (1 per range)	
Temperature	Range	-10.0 to 110.0 °C / 14.0 to 230.0 °F (Meter)	
	Resolution	0.1 °C / 0.1 °F	
	Accuracy	± 0.5 °C (± 0.9 °F)	
	ATC	Yes (0 to 80 °C)	Yes (0 to 100 °C)
pH	Range	—	-2.00 to +16.00 pH
	Resolution	—	0.01 pH
	Accuracy	—	±0.01 pH
	Calibration	—	Up to 5 points
mV	Range	—	± 600 mV
	Resolution	—	0.1 mV (±199.9 mV) ; 1 mV (beyond ±200 mV)
	Accuracy	—	±0.2 mV (±199.9 mV) ; ±2 mV (beyond ±200 mV)
Meter Features	Memory	50 Data Sets	
	Output	Recorder(+2000 mV)	
	Input	BNC, phono (ATC)	
	Power Requirements	9 V DC adapter for 120 VAC or 220 VAC, 500 mA	
Standard Supply	Electrode	ECCONSEN91W, ultem body Cond./ TDS electrode, cell constant 1.0,1m cable included	ECFC7252201B, plastic body pH electrode and ECCONSEN91W, ultem body Cond./ TDS electrode, cell constant 1.0 , both 1 m cable included
Dimension ( LxWxH); Weight	Meter	23 (L) x 18 (B) x 6 (H) cm ; 750 g	
	Boxed	40 (L) x 26 (B) x 9 (H) cm ; 1400 g	




Product Code	Cat No.	Description	Price (Rs.)
ECCON510435	8050 008	CyberScan CON 510 Conductivity/TDS Meter with Ultem body Conductivity Electrode ECCONSEN91W, Integral electrode holder & Power adapter	38500.00
ECPCS10435	8054 001	CyberScan PC 510 Bench pH/Conductivity/TDS Meter with Double Junction Plastic pH Electrode ECFC7252201B, Ultem body Conductivity Electrode ECCONSEN91W, Integral electrode holder & Power adapter	44900.00
<b>ACCESSORIES</b>			
ECFC7252201B	8034 020	General Purpose Plastic- body Double Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	6160.00
ECPHWPTM01W	8034 019	ATC Probe (for PC510 only); 1m cable length	6300.00
ECCONSEN91W	8050 004	2 Stainless Steel Rings Ultem-body Electrode with ATC, cell constant K=1.0, 16x144 mm, 6-pin connector, 1m cable length (for CON 510 & PC 510)	15525.00
ECCONSEN72W	8050 005	2 Platinum Rings Glass-body Electrode with ATC, cell constant K=0.1, 16x110 mm, 6-pin connector, 1m cable length (for CON 510)	27945.00
ECCONSEN73W	8050 006	2 Platinum Rings Epoxy-body Electrode with ATC, cell constant K=10.0, 16x110 mm, 6-pin connector, 1m cable length (for CON 510)	34155.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug ,9V,6W, CENTRE +ve ( for Cyberscan 510 series)	2360.00

pH/ORP Bench Meters		ECPH51042S	ECPH51042S-I
			
pH	Range	0.00 to 14.00 pH	
	Resolution	0.01 pH	
	Accuracy	±0.01 pH	
	Calibration	1 to 5 Points	
mV	Range	± 1999 mV	
	Resolution	0.1 (± 199.9 mV) / 1 mV (Beyond ± 199.9 mV)	
	Accuracy	± 0.2( + 199.9 mV) / ± 2 mV (Beyond ± 199.9 mV)	
Temperature	Range	0.0 to 100.0 °C	
	Resolution	0.1 °C	
	Accuracy	±0.3 °C	
	ATC	Yes (0 to 100 °C)	
Meter Features	Memory	100 Data Sets	
	Output	Recorder (+2000 mV)	
	Input	BNC, phono (ATC)	
	Power Requirements	9 V DC adapter for 120 VAC or 220 VAC, 500 mA	
Standard Supply	Electrode	Eutech make ECFC7252101B, plastic body single junction pH combination electrode, BNC connector, 1m cable length included . ORP electrode to be ordered separately	Indigenous make IND786 , glass- body pH combination electrode, BNC connector, 1m cable length included. ORP electrode to be ordered separately
	Temperature Probe	Eutech make ATC probe PH5TEMB01P included	Indigenous make ATC probe included
Dimension ( LxWxH); Weight	Meter	23 (L) x 18 (B) x 6 (H) cm ; 750 g	
	Boxed	40 (L) x 26 (B) x 9 (H) cm ; 1400 g	

Product Code	Cat No.	Description	Price (Rs.)
ECPH51042S	8042 002	CyberScan pH 510 pH/mV Meter with Single junction Plastic pH Electrode ECFC7252101B, ATC probe , Integral electrode holder & Power adapter	29900.00
ECPH51042S-I	8042 003	CyberScan pH 510 pH/mV Meter with Indigenous Glass pH electrode IND 786, DAS, RS232C cable, Indigenous ATC probe, Integral electrode holder & Power adapter	27900.00
<b>ACCESSORIES</b>			
ECFC7252101B	8034 004	General Purpose Plastic-body Single Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	3399.00
IND786	8034 009	General Purpose Glass-body Refillable Indigenous pH Combination Electrode, BNC connector, 1m cable length	1775.00
ECFC7960201B	8052 008	General Purpose Plastic-body Double Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	15875.00
ECFC7960101B	8052 007	General Purpose Plastic-body Single Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	12940.00
ECPH5TEMB01P	8034 003	ATC Probe (for pH 510), 1m cable length	4915.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug ,9V,6W, CENTRE +ve ( for Cyberscan 510 series)	2360.00

Conductivity/ TDS Handheld Meters Specifications		ECCON1103K	ECCON603PLUSK	ECTDS603PLUSK
Measuring Parameter		Conductivity/TDS/°C	Conductivity/°C	TDS/°C
Conductivity	Range	0- 19.99, 19.9-199.9, 199- 1999 µS/cm; 2.00- 19.99, 20.0 - 199.9 mS/cm		-
	Resolution	0.01, 0.1, 1 µS/cm; 0.01, 0.1 mS/cm; (0.05% of full scale)		-
	Accuracy	± 1% of full scale		-
TDS	Range	0- 9.99, 10-99.9, 100-999 ppm; 1.0-9.99, 10- 99.9 ppt	-	0- 9.99, 10-99.9, 100-999 ppm; 1.0-9.99, 10- 99.9 ppt
	Resolution	0.01, 0.1, 1 ppm; 0.01, 0.1 ppt (0.05% of full scale)	-	0.01, 0.1, 1 ppm; 0.01, 0.1 ppt (0.05% of full scale)
	Accuracy	± 1% of full scale		± 1% of full scale
	TDS Factor	0.4 to 1.0		0.4 to 1.0
Calibration Points	4 points (1 per range) auto, 5 points (1 per range) manual			5 points (1 per range) manual
Temperature	Range	0.0 to 100 °C ( 32 to 212 °F)		
	Resolution	0.1° C / 0.1° F		
	Accuracy	± 0.5° C / ± 0.9° F		
	Compensation	ATC/MTC (0 to 80.0° C)		
	Normalization	20 or 25° C		
Meter Features	Temp. Coefficient	0.0- 10.0%	0.0- 3.0%	
	Cell Constant	0.1, 1.0, 10.0	-	
	Memory	50 data sets	-	
	Operating Temperature	0 to 50 °C		
	LCD Display	Dual display LCD (5.8 x 3.3 cm)	Single display LCD (4.5 x 2.3 cm)	
	Power Requirements	4 x 1.5 V 'AAA' alkaline batteries or 9 VDC adapter, 200 mA (Optional)	4 x 1.5 V 'AAA' alkaline batteries	
Dimensions (LxWxH); Weight	Meter	18x 9x 4 cm/220g	15.7x 8.5x 4.2 cm/255g	
	Boxed	40x 33 x 10 cm/2100g	36x 28 x 8 cm/ 1555 g	

Product Code	Cat No.	Description	Price Rs./Pc.
ECCON603PLUSK	8050 001	COND 6 + Conductivity Meter with electrode ECCONSEN91B & Conductivity carrying kit set	30015.00
ECTDS603PLUSK	8051 001	TDS 6 + TDS Meter with electrode ECCONSEN91B & TDS carrying kit set	30530.00
ECCON1103K	8050 002	CyberScan CON 11 Conductivity/TDS Meter with Conductivity electrode ECCONSEN91W, 1 electrode holder & Conductivity carrying kit set	33640.00
<b>Accessories</b>			
ECCONSEN91B	8050 003	2 Stainless Steel Rings Ultem-body Electrode with ATC, cell constant K = 1.0, 16x144 mm, BNC connector, 1m cable length (for CON 6 +, TDS 6 +, Salt 6 + )	16300.00
ECCONSEN91W	8050 004	2 Stainless Steel Rings Ultem-body Electrode with ATC, cell constant K = 1.0, 16x144 mm, 6-pin connector, 1m cable length (for CON 11)	15525.00
ECCONSEN72W	8050 005	2 Platinum Rings Epoxy-body Electrode with ATC, cell constant K = 0.1, 16x110 mm, 6-pin connector, 1m cable length (for CON 11)	27945.00
ECCONSEN73W	8050 006	2 Platinum Rings Epoxy-body Electrode with ATC, cell constant K = 10.0, 16x110 mm, 6-pin connector, 1m cable length (for CON 11)	34155.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug , 9V, 6W, CENTRE +ve ( for CON 11 or pH 11 )	2360.00

pH/ORP Handheld Meters Specifications		CyberScan Dual-Display		EcoScan Single-Display			
		ECPH1102K		ECPH602PLUSK		ECPH502PLUSK	
							
Measuring Parameter		pH/ORP/°C				pH/°C	
pH	Range	-2.00 to 16.00 pH		0.00 to 14.00 pH			
	Resolution			0.01 pH			
	Accuracy			±0.01 pH			
	Calibration Points	Up to 5		Up to 3			
	Buffer Sets	USA (pH 1.68, 4.01, 7.00, 10.01, 12.45) NIST (pH 1.68, 4.01, 6.86, 9.18, 12.45)		USA (pH 4.01, 7.00, 10.01) NIST (pH 4.01, 6.86, 9.18) Pb (pH 4.10, 6.97)			
ORP	Range	±1999 mV		±1000 mV		-	
	Resolution			0.1 mV(+ 199.9mV); 1 mV (> + 199.9mV)			
	Accuracy			+0.2mV (+ 199.9mV); 2 mV (> + 199.9mV)			
Temperature	Range			0.0 to 100.0 °C			
	Resolution			0.1 °C			
	Accuracy			±0.5 °C			
Meter Features	Temperature Compensation			ATC/MTC (0 to 100 °C)			
	Memory	50 Datasets		-			
	Power Requirements	4x1.5V 'AAA' Alkaline batteries or 9VDC Adapter, 200mA (Optional)		4x 1.5 V 'AAA' Alkaline batteries			
Dimensions (LxWxH); Weight	Meter	18 x 9 x 4 cm ; 220 g		15.7x 8.5x 4.2 cm/255g			
	Boxed	40x33x10cm/2100g		36x 28 x 8 cm/ 1555 g			

Product Code	Cat No.	Description	Price Rs./Pc.
ECPH1102K	8052 003	CyberScan pH 11 pH/mV Meter with double junction pH electrode ECFC7252201B, ATC probe & pH carrying kit set	33120.00
ECPH602PLUSK	8052 002	pH 6 + pH/ORP Meter with single junction pH electrode ECFC7252101B, ATC probe & pH carrying kit set	27945.00
ECPH502PLUSK	8052 001	pH 5 + pH Meter with single junction pH electrode ECFC7252101B, ATC probe & pH carrying kit set	26390.00
<b>Accessories</b>			
ECPH5TEM01P	8052 004	ATC probe (for pH 6 + , pH 5 + , pH 11 only); 1m cable length	4915.00
ECFC7252101B	8034 004	General Purpose Plastic-body Single Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	3399.00
ECFC7252201B	8052 006	General Purpose Plastic-body Double Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	6160.00
ECFC7960101B	8052 007	General Purpose Plastic-body Single Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	12940.00
ECFC7960201B	8052 008	General Purpose Plastic-body Double Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	15875.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug, 9V, 6W, CENTRE +ve (for pH 11 or Con 11)	2350.00

Unlike other conventional testers, the SaltTestr® 11 offers ±1 % full scale accuracy

Protective rubber boot doubles up as stand



IP54-rated housing protects against water splashes

Splashproof keypad

- More User-Friendly
- Direct temperature readout in ° C and ° F
  - Large screen display
  - Battery-level indicator
  - Non-volatile memory
- High Accuracy
- ±1 % full scale accuracy
  - Automatic Temperature Compensation (ATC)
- More Savings
- Replaceable sensors
  - Advanced power-conserving design

- Measures in ppt & %
- Quick and easy push-button calibration
- User customisation for normalisation temperature and temperature coefficient
- Electrode with built-in ATC designed for minimal air bubble entrapment during measurement
- Rugged all-in-one meter kit available
- Other features include: HOLD function, auto-off, self-diagnostics



Salinity Pocket Tester & Handheld Meter Specifications			
Measuring Parameter		Salinity/°C	
Highlights		High accuracy and wide range Salinity measurements	Large dual-display
Salinity (TDS)/%	Range	1.0 to 50.0 ppt/0.1 to 5.00 %	0 to 10.00 ppt*
	Resolution	0.1 ppt/0.01 %	0.10 ppt
	Accuracy	±1 % Full scale	
	Calibration Point	1 (manual)	
Temperature	Range	-10.0 to 110.0 °C	0 to 50 °C/32 to 122 °F
	Resolution	0.1 °C	0.1° C / 0.1° F
	Accuracy	±0.5 °C	± 0.5 °C / ± 0.9 °F
	Compensation	ATC	
	Coefficient (Per °C)	0.0- 3.0%	2 %
	Normalization	20.0 or 25.0° C	25.0 °C
Meter Features	Auto-Off	20 Mins after last key pressed	8.5 Mins after last key pressed
	Waterproof (IP67)	No	Yes
Power Requirements		4x 1.5 V 'AAA' Batteries	4x 1.5 V 'A76' Micro alkaline batteries
LCD Display		Dual display LCD (4.5 x2.3 cm)	Single display LCD (2.1 x2.7 cm)
Dimensions (LxWxH); Weight	Meter	15.7x 8.5x 4.2 cm/255g	16.5x 3.8cm/90g
	Boxed	36x 28 x 8 cm/ 1555 g	18.5x6.5x5 cm/ 200 g

\* 1 ppt = 1000 ppm (ppm: parts per million / ppt: parts per thousand)

Product Code	Cat No.	Description	Price Rs./Pc.
ECSALT603PLUSK	8003 007	Salt 6 + Salinity Meter with electrode ECCONSEN91B & Salinity carrying kit set	30530.00
SALTTEST11	8003 006	Waterproof SaltTestr 11 large display tester	8500.00
<b>Accessories</b>			
ECCONSEN91B	8050 003	2 Stainless Steel Rings Ultem-body Electrode with ATC, cell constant K = 1.0, 16x144 mm, BNC connector, 1m cable length (for CON 6 + , TDS 6 + , Salt 6 + )	16300.00
ECTDSENSOR	8014 007	Replacement sensor for waterproof SaltTestr 11 & SaltTestr, 2-pin type	2780.00
ECPOUCH01	8014 005	Carrying pouch for pocket tester	490.00
ECBATT14	8014 004	Alkaline button cell batteries (50 units per pack)	2715.00

# Eutech Instruments With a Difference

Same Reliability, More Convenience

**EUTECH**  
INSTRUMENTS  
*Technology Made Easy...*

## Economy waterproof eco pocket tester series



Click-Lock Battery Compartment

All Push Button Operation

IP67 Waterproof Housing

Transparent Protective Cap

Easy to use

Large easy to read LCD

Auto-Calibration

Automatic Temperature Compensation

Available for  
pH, TDS,  
Conductivity,  
Salinity

## Economy sturdy portable plus series



Protective Rubber Boot

Easy-To Read Display

Tactile Keypad

Convenient  
Benchtop Stand

Available in  
complete kit version



# Handy multi-parameter pocket testers 35 series

Measure up to 5 parameters with one tester  
pH, Conductivity, TDS, Salinity and Temperature



IP67 waterproof housing



Large custom dual display LCD



User-replaceable sensor



Double junction sensor minimizes clogging and contamination



Maintain **Accuracy** and **Extend Life** of instruments...

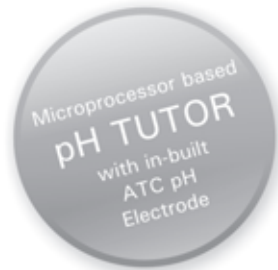
Standardize on a regular basis. Calibration solutions for pH, TDS, Conductivity, Redox, Salinity

Choice of  
480 ml Bottles  
1000 ml Bottles  
20x 20 ml Sachets



## CyberScan pH Tutor pH/°C

*Simple, Economical And Accurate*




Easy to read LCD display provides optimum view

Simple push-button calibration

Flexible arm Electrode stand



IP54 rated splash proof tactile keypad ensures efficient meter operation

pH Tutor		
Measuring Parameter	pH/°C	
Highlights	Dual display standard bench	
pH	Range	0.00 to 14.00 pH
	Resolution	0.01pH
	Accuracy	±0.01pH
	Calibration Points	Up to 3
	Buffer Sets	USA, NIST
Temperature	Range	0 to 100°C
	Resolution	0.1 °C
	Accuracy	±0.3 °C
Meter Features	Temperature Compensation	ATC/MTC (0 to 100°C)
	Input	BNC, phono
	Power Requirements	9 V DC Adapter, 500 mA (220 VAC)
Dimensions (LxWxH); Weight	Meter	23 x 18 x 6 cm ; 570 g
	Boxed	40 x 26 x 9 cm ; 1200 g

Order Code	ECPHTUTOR-DS	ECPHTUTOR-D	ECPHTUTOR-S	ECPHTUTOR-I
pH Electrode	EUTECH "3-in-1" pH/Temp Order Code ECFC7352901B	EUTECH "3-in-1" pH/Temp Order Code ECFC7352901B	EUTECH Electrode Order Code ECFC7252101B	Indigeneous pH Electrode Order Code IND786
Stand	EUTECH electrode stand with swivel arm	Indigeneous electrode stand	Indigeneous electrode stand	Indigeneous electrode stand



Product Code	Cat No.	Description	Price Rs./Pc.
ECPHTUTOR-DS	8034 011	CyberScan pH Tutor meter with plastic-body "3-in-1" pH/Temp.(ATC in-built) combination electrode, 12x90mm, BNC connector, 1m cable length, integrated electrode stand with swivel arm and power adapter	23900.00
ECPHTUTOR-D	8034 001	Cyberscan pH tutor pH meter with plastic-body "3-in-1" pH/Temp.(ATC in-built) ECFC7352901 combination electrode, 12x90mm, BNC connector, 1m cable length, indigenous electrode holder and power adapter	19500.00
ECPHTUTOR-S	8034 002	CyberScan pH Tutor pH meter with single junction pH electrode ECFC7252101B combination electrode, 12x90mm, BNC connector, 1 m cable length, indigenous electrode holder and power adapter. ATC probe to be ordered separately	16500.00
ECPHTUTOR-I	8034 010	CyberScan pH Tutor meter with indigeneous refillable glass pH electrode IND786, BNC connector, 1m cable length, indigenous electrode stand and power adapter. ATC probe to be ordered separately	13250.00
ECFC7252101B	8034 004	General purpose plastic-body single junction gel-Filled pH combination electrode, 12x110mm, BNC connector, 1m cable length	3399.00
ECFG7350401B	8034 006	General purpose glass-body single junction refillable pH combination electrode, annular ceramic reference junction with protective sensor guard, 12x110mm, BNC connector, 1m cable length & 10ml refilling electrolyte	6624.00
ECFC7352901B	8034 005	General purpose plastic-body "3-in-1" pH/Temp. combination electrode, 12x90mm, BNC connector, 1m cable length (for pH Tutor)	6210.00
IND786	8034 009	General purpose glass-body refillable indigeneous pH combination electrode, BNC connector, 1m cable length	1775.00
ECPH5TEMB01P	8034 003	ATC Probe, 1m cable length (for pH Tutor)	4915.00
ECELSTDCNEW	8034 007	Electrode stand with swivel arm (for pH Tutor)	5640.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug, 9V,6W, CENTRE + ve (for Tutor)	2360.00



## Electrode Selection Guide



### ELECTRODES

Product Code	Cat No.	Description	Application Code	pH Range	Temp. Range ° C	Length (mm)	Dia. (mm)	Internal Reference	Price Rs./Pc.
ECFC7352901B	8034 005	Plastic body	L	1 – 13	0 to 80	110	12	Ag/AgCl (S)	6210.00
ECFG7350401B	8034 006	Glass body	A,F	0 – 13	0 to 100	110	12	Ag/AgCl (R)	6624.00
ECFG6351101B	8034 013	Glass body	J	0 – 13	0 to 100	55	8	Ag/AgCl (S)	17388.00
ECFC7252101B	8034 004	Plastic body	A, L	1 – 13	0 to 80	110	12	Ag/AgCl (S)	3399.00
EC620131	8034 015	Glass body	A,B,C,D,L,O,Q	0 – 14	0 to 80	120	12	Ag/AgCl (S)	14490.00
EC620130	8034 016	Glass body	A,B,C,G,L,O,Q	0 – 14	0 to 80	160	12	Ag/AgCl®	22340.00
EC620132	8034 017	Plastic body	A,B,G,L,O,Q	0 – 14	0 to 60	105	12	Ag/AgCl (S)	10500.00
EC620133	8034 018	Glass body	A,B,I,O,Q	2 – 11	0 to 50	80	6	Ag/AgCl (S)	25560.00

**A** General purpose, aqueous pH measurements. Quality control, general laboratory and aquarium water

**B** Tris buffers, clinical, and biological media containing proteins, creams, fats, and cosmetics.

**C** Research measurements, fruit juices, beer, milk and yogurt.

**D** High viscosity solutions such as emulsions, suspensions, paints and varnishes where frequent cleaning of the reference is necessary.

**F** Low temperature measurements.

**G** Low ionic strength solutions, such as high purity water.

**J** Solid or semi-solid samples such as cheese, meats, fruits, bread, or other similar samples.

**L** Portable pH meters; field and school use.









**M** Micro sample, such as semi micro curettes and NMR tube.

**N** Test tube measurements.

**O** Reference contamination problems that require a double junction reference, such as media containing sulfides, bromides, iodides, and cyanides.

**P** Measurements in long, narrow vessels.

**Q** Soil pH measurements.

Conductivity/ TDS Pocket Testers Specifications		EC Waterproof Large Dual-Display Pocket Tester		EC Waterproof Single-Display Pocket Tester		TDS Waterproof Large Dual-Display Pocket Tester		TDS Waterproof Single-Display Pocket Tester	
		ECTestr 11 +	ECTestr 11	ECOECTESTHIGH	ECOECTESTLOW	TDSTestr 11 +	TDSTestr 11	ECOTDSTESTHIGH	ECOTDSTESTLOW
									
Measuring Parameter		Conductivity/°C/°F		Conductivity		TDS/°C/°F		TDS	
Highlights		Multi-range	Dual-range	Single-range		Multi-range	Dual-range	Single-range	
Conductivity	Range	..to 200.0µS/cm ..to 2000µS/cm ..to 20.00 mS/cm	..to 2000 µS/cm ..to 20.00 mS/cm	..to 19.90 mS/cm#	..to 1990 µS/cm	.. to 200.0 ppm .. to 2000 ppm .. to 10.00 ppt*	.. to 2000 ppm .. to 10.00 ppt*	.. to 10.00 ppt*	..to 1990 ppm
	Resolution	0.1 µS/cm 1 µS/cm 0.01 mS/cm	10 µS/cm 0.10 mS/cm	0.10 mS/cm	10 µS/cm	0.1 ppm 1 ppm 0.01 ppt	10 ppm 0.10 ppt	0.10 ppt	10 ppm
	Accuracy	± 1% full scale		+1%full scale (+2% above 10mS)	+1% full scale	± 1 % full scale		+1% full scale (+2% above 5ppt)	+1% full scale
TDS Factor		-		-		0.40 to 1.00 (Selectable)		0.50 to 1.00	0.40 to 1.0
Calibration Points		3 Auto, 3 Manual	2 Auto, 2 Manual	1 Point		3 Manual	2 Manual	1 Point	
Temperature	Range	0 to 50.0 °C or 32.0 to 122.0 °F		-		0 to 50.0 °C or 32.0 to 122.0 °F		-	
	Resolution	0.1 °C/°F		-		0.1 °C/°F		-	
	Accuracy	± 0.5 °C/0.9 °F		-		± 0.5 °C/0.9 °F		-	
	Calibration Window	± 5.0 °C/9.0 °F		-		± 5.0 °C/9.0 °F		-	
Meter Features	ATC	Yes(0to50°C or 32.0 to 122.0°F)		Yes		Yes(0.0to50.0°C or 32.0 to 122.0°F)		Yes	
	Sensor Type	Cup	Dip	2 Pin		Cup	Dip	2 Pin	
	Temperature Coefficient	2 % per °C		-		2 % per °C		-	
	Normalization Temperature	25.0 °C		-		25.0 °C		-	
	Non-Volatile Memory	Yes							
	Auto-Off	8.5 Mins after last key pressed							
	Operating Temperature	0.0 to 50.0 °C							
	LCD Display	Custom dual-display 2.7 cm(H)x2.1 cm(W)		Single-display		Custom dual-display 2.7 cm(H)x2.1 cm(W)		Single-display	
	Power	4x 1.5 V 'A76' Micro alkaline batteries							
Battery Life	> 150 Hours								
Dimensions (LxWxH); Weight	Tester	16.5 x 3.8 cm ; 90 g		Unit Only 16.3x4.5x3 cm/90g		16.5 x 3.8 cm ; 90 g		Unit Only 16.3x4.5x3 cm/90g	
	Boxed	22 x 6 x 5 cm ; 170 g		24.5x13.5x4.5 cm /137g		22 x 6 x 5 cm ; 170 g		24.5x13.5x4.5 cm /137g	

# 1 mS/cm = 1000 µS/cm (µS: microSiemens / mS: milliSiemens) \* 1 ppt = 1000 ppm (ppm: parts per million / ppt: parts per thousand)

Product Code	Description	Price Rs./Pc.
ECTEST11PLS	8036 009 Waterproof ECTestr11 + multi range tester with ATC & temperature display (0 - 200.0 µS/cm; 0 - 2000 µS/cm; 0 - 20.00 mS/cm)	9400.00
ECTEST11	8036 008 Waterproof ECTestr11 dual range tester with ATC & temperature display (0 - 2000 µS/cm; 0 - 20.00 mS/cm)	6940.00
ECOECTESTLOW	8036 010 Waterproof EcoTestr EC Low tester with ATC, 1 point calibration	4450.00
ECOECTESTHIGH	8036 011 Waterproof EcoTestr EC High tester with ATC; 1 point calibration	4450.00
TDSTEST11PLS	8037 009 Waterproof TDSTestr11 + multi range tester with ATC & temperature display (0 - 100.0 ppm; 0 - 1000 ppm; 0 - 10.00 ppt)	9400.00
TDSTEST11	8037 008 Waterproof TDSTestr11 dual range tester with ATC & temperature display (0 - 1000 ppm; 0 - 10.00 ppt)	6520.00
ECOTDSTESTLOW	8037 010 Waterproof TDS Testr TDS Low tester with ATC, 1 point Calibration	4450.00
ECOTDSTESTHIGH	8037 011 Waterproof TDS Testr TDS High tester with ATC; 1 point Calibration	4450.00



Large custom dual-display LCD











User-replaceable sensor






Ribbed body for better grip



Cup type sensor

pH/ORP Pocket Testers Specifications		ECOPHTEST 1	ECOPHTEST 2	pHTestr 30	pHTestr 20	pHTestr 10	pHTestr 10BNC	pHSpear	ORPTestr 10	
										
Measuring Parameter		pH	pH	pH/°C/°F	pH				ORP (mV)	
Highlights		±0.1 pH Accuracy	±0.1 pH Accuracy	0.01, Temp. display	0.01 Resolution	0.1 Resolution	BNC connection	Open pore, spear tip		
pH/mV	Range	0.0 to 14.0 pH		-1.00 to 15.00 pH		-1.0 to 15.0 pH		-1.00 to 15.00 pH		
	Resolution	0.1 pH		0.01 pH		0.1 pH		0.01 pH		
	Accuracy	±0.1 pH		±0.01 pH		±0.1 pH		±0.01 pH		
	Calibration Points	1 Points	3 Point	3 Auto				1 Manual		
Buffer Sets		USA		USA: 4.01/7.00/10.01 ; NIST: 4.01/6.86/9.18						
Temperature	Range	-		0 to 50.0 °C 32.0 to 122.0 °F		-		0 to 50.0 °C 32.0 to 122.0 °F (MTC)		
	Resolution	-		0.1 °C/°F		-		0.1 °C/°F		
	Accuracy	-		± 0.5 °C/0.9 °F		-		-		
	Calibration Points	-		±5 °C/9 °F from default value		-		-		
Meter Functions	ATC	No	Yes	Yes			No (MTC)		No	
	Sensor Type	Single-junction		Double-junction			BNC	Double-junction		
	Auto-Off	8.5 Mins after last key pressed								
	Operating Temp.	0 to 50 °C								
	LCD Display	Single display			Custom dual-display 2.7 cm (H) x 2.1 cm (W)					
Power	4 x 1.5 V "A76" alkaline batteries									
Dimensions (LxWxH) ; Weight	Tester	16.3x4.5x3 cm/90g		16.5 x 3.8 cm ; 90 g			24x3.8cm;103g		16.5 x 3.8 cm ; 90 g	
	Boxed	24.5x13.5x4.5 cm /137g		22 x 6 x 5 cm ; 170 g			25.5x13.5x7.5cm; 240g		22 x 6 x 5 cm ; 170 g	

Product Code	Cat No.	Description	Price Rs./Pc.
PHTEST10	8020 001	Waterproof pHTestr 10 Tester with ATC; ±0.1 pH accuracy	6100.00
PHTEST20	8020 002	Waterproof pHTestr 20 Tester with ATC; ±0.01 pH accuracy	8180.00
PHTEST30	8020 003	Waterproof pHTestr 30 Tester with ATC and Temperature Readout; ±0.01 pH resolution	9550.00
PHTEST10BNC	8020 004	Waterproof pHTestr 10 BNC Tester with MTC; BNC connector sensor; ±0.01 pH resolution (meter only – electrode to be ordered separately)	8280.00
PHSPEAR	8020 005	Waterproof pHSpear Tester with MTC; double-junction spear-tip electrode; ±0.01 pH accuracy	24325.00
ORPTEST10	8016 003	Waterproof ORPTestr 10 Large Dual Display Tester (-999 to +1000 mV)	14750.00
ECOPHTEST1	8020 008	Waterproof EcoTestr pH 1 Tester without ATC, 1 point Calibration	4295.00
ECOPHTEST2	8020 009	Waterproof pHTestr 2 Tester with ATC; 3 point Calibration	5100.00
PHSENSOR03DJ	8022 001	Replacement Double Junction Sensor for pHTest10, 20, 30	3610.00
PHSENSOR04	8021 006	Replacement Double Junction Spear-tip Electrode for pHSpear	15790.00
ECPOUCH01	8014 005	Carrying Pouch for Pocket Tester	490.00
ECBATT14	8014 004	Alkaline Button Cell Batteries (50 units per pack)	2715.00

		PCSTestr 35	PCTestr 35	PTTestr 35
Multi-Parameter Pocket Testers Specifications				
Measuring Parameter		pH / Conductivity / TDS / Salinity / ° C / ° F	pH / Conductivity / ° C / ° F	pH / TDS / ° C / ° F
Highlights		Waterproof, temp. display, 0.01 resolution, replaceable sensor	Waterproof, temp. display, 0.1 pH resolution, replaceable sensor	
pH	Range	0.00 to 14.00 pH	0.0 to 14.0 pH	
	Resolution	0.01 pH	0.1 pH	
	Accuracy	±0.01 pH	±0.1 pH	
	Cal. Points	Up to 5 (auto)		
	Auto-Buffer Recognition	Yes		
Conductivity	Range	0.0 to 199.9 µS/cm / 200 to 1999 µS/cm / 2.00 to 20.00 mS/cm	0 to 1999 µS/cm / 2.00 to 20.00 mS/cm	-
	Resolution	0.1 µS/cm / 1 µS/cm / 0.01 mS/cm	1 µS/cm / 0.01 mS/cm	-
	Accuracy	±1 % full scale		
	Cal. Points	3 auto, 3 manual	2 auto, 2 manual	-
	Temperature Coefficient	0.0 to 10.0 % / °C		
	Normalisation Temperature	25.0 °C		
Auto-Ranging	Yes			
TDS	Range	0.0 to 99.9 ppm / 100 to 999 ppm / 1.00 to 10.00 ppt	-	0 to 999 ppm / 1.00 to 10.00 ppt
	Resolution	0.1 ppm / 1 ppm / 0.01 ppt	-	1 ppm / 0.01 ppt
	Accuracy	±1 % full scale		
	Cal. Points	Up to 3 (manual)	-	Up to 2 (manual)
	TDS Factor	0.40 to 1.00	-	0.40 to 1.00
Salinity	Range	0.0 to 99.9 ppm / 100 to 999 ppm / 1.00 to 10.00 ppt / 0.0 to 1.00 %	-	-
	Resolution	0.1 ppm / 1 ppm / 0.01 ppt / 0.01 %	-	-
	Accuracy	±1 % full scale		
Cal. Points	1 (manual above 1.00 ppt)			
Temperature	Range	0 to 50.0 ° C / 32 to 122.0 ° F		
	Resolution	0.1 ° C / 0.1 ° F		
	Accuracy	0.5 ° C / 0.9 ° F		
Meter Features	Temperature Compensation	ATC / MTC		
	Sensor Type	pH / Conductivity / TDS / Salinity / Temperature		
	Non-Volatile Memory	Yes		
	Auto-Off	8.5 mins after last key pressed (can be disabled)		
	LCD Display	Dual-display LCD (2.1 x 2.7 cm)		
	Power	4 x 1.5 V 'A76' micro alkaline batteries		
	Battery Life	> 150 hrs		
Dimensions (LxWxH); Weight	Tester	16.5 x 3.8 cm ; 90 g		
	Boxed	18.5 x 6.5 x 5 cm ; 200 g		

Product Code	Cat No.	Description	Price Rs./Pc.
PCTEST35	8049 001	Waterproof PCTestr 35 pH/Conductivity/Temp Tester with ATC; (±0.1 pH resolution; 0 - 2000 µS/cm; 0 - 20.00 mS/cm)	11500.00
PTTEST35	8049 002	Waterproof PTTestr 35 pH/TDS/Temp Tester with ATC; (±0.1 pH resolution; 0 - 1000 ppm; 0 - 10.00 ppt)	11500.00
PCSTEST35	8049 003	Waterproof PCSTestr 35 pH/Conductivity/TDS/Salinity/Temp Tester with ATC; (±0.01 pH resolution; 0 - 200.0 µS/cm; 0 - 2000 µS/cm; 0 - 20.00 mS/cm; 0 - 100.0 ppm; 0 - 1000 ppm; 0 - 10.00 ppt; 0 - 100.0 ppm; 0 - 1000 ppm; 0 - 10.00 ppt; 0 - 1.00%)	14750.00
PCSENSOR	8049 004	Replacement pH/Conductivity/Temp Sensor for PCTestr 35, PTTestr 35, PCSTestr 35	5125.00



### Calibration Solutions \*

Wide range of calibration solutions for pH, ORP, Conductivity, TDS and Salinity. Calibration solutions come in a convenient ready to use 480 ml leak-proof bottles. Calibration must be done on regular basis for maintaining accuracy of the instrument. It also helps negate the effect of electrode ageing and contamination. Minimum shelf life of the solutions is 2 years.

#### pH Buffer Solutions ( 480 ml)

Cat. No.	Product Code No.	Description	Maximum Price Rs.
8005 001	ECBU4BT	pH 4.01 buffer	1350.00
8005 002	ECBU7BT	pH 7.00 buffer	1350.00
8005 003	ECBU9BT	pH 9.00 buffer	1350.00
8005 004	ECBU10BT	pH 10.01 buffer	1350.00
8005 005	ECBU12BT	pH 12.45 buffer	1350.00
8005 006	ECBU1BT	pH 1.68 buffer	1350.00
8005 007	ECBU686BT	pH 6.86 buffer	1350.00
8005 008	ECBU918BT	pH 9.18 buffer	1350.00

#### Conductivity Solutions ( 480 ml)

Cat. No.	Product Code No.	Description	Maximum Price Rs.
8006 008	ECCON84BT	84 $\mu$ S KCL	1350.00
8006 001	ECCON100BT	100 $\mu$ S KCL	1350.00
8006 002	ECCON500BT	500 $\mu$ S KCL	1350.00
8006 003	ECCON1413BT	1413 $\mu$ S KCL	1350.00
8006 004	ECCON2764BT	2764 $\mu$ S KCL	1350.00
8006 005	ECCON1288BT	12.88 mS KCL	1350.00
8006 006	ECCON1118BT	111.8 mS KCL	1350.00
8006 007	ECCON5000BT	5.0 mS KCL	1350.00

#### TDS Solutions ( 480 ml)

Cat. No.	Product Code No.	Description	Maximum Price Rs.
8007 004	EC44250BT	50 ppm	1350.00
8007 001	EC442300BT	300 ppm	1350.00
8007 002	EC4421000BT	1000 ppm	1350.00
8007 003	EC4423000BT	3000 ppm	1350.00

#### ORP Calibration Standards

Cat. No.	Product Code No.	Description	Maximum Price Rs.
8047 001	ECORPPRE	Pretreatment (475 mV)	2485.00
8047 002	ECORPQUIN	Quinhydrone 255 (255 mV, I 15mVa, 25° C)	2485.00
8047 003	ECORPQUIN086	Quinhydrone 81 (81 mV)	2485.00

#### Salinity Calibration Standards

Cat. No.	Product Code No.	Description	Maximum Price Rs.
8048 001	ECNACL5PPT	5 ppt NaCl	1400.00
8048 002	ECNACL25PPT	25 ppt NaCl	1400.00
8048 003	ECNACL45PPT	45 ppt NaCl	1400.00



# CERTIFICATE



This is to certify that the company



## Kern & Sohn GmbH

Ziegelei 1  
72336 Balingen  
Germany

has implemented and maintains a **Quality Management System**.

### Scope:

Manufacture and sale of measuring devices and components.

Through an audit, documented in a report, performed by DQS Medizinprodukte GmbH, it was verified that the management system fulfills the requirements of the following standard:

## ISO 9001 : 2008

















Certificate registration No.	223690 QM08
Certificate unique ID	170544948
Effective date	2012-04-30
Expiry date	2015-04-29
Frankfurt am Main	2012-04-30



## DQS Medizinprodukte GmbH

Frank Graichen  
Managing Director

## Pictograms

	<b>Internal adjusting (CAL):</b> quick setting of the balance's accuracy with internal adjusting weight (Motor-driven).
	<b>Adjusting program (CAL):</b> for quick setting of the balance's accuracy. External adjusting weight required.
	<b>Piece counting:</b> reference quantities selectable. Display can be switched from piece to weight.
	<b>Data interface:</b> RS 232 C, bidirectional, for connection of printer or PC.
	<b>GLP/ISO record keeping</b> of weighing data with date, time and ident. - No. Only with printers from KERN.
	<b>Net-total weighing:</b> weight of tare-cup and weight of components memorized in two separate stores.
	<b>Percentage determination:</b> Displays the deviation from the reference weight (100%) in % instead of grammes.
	<b>Unit:</b> Weighing units can be switched to e.g. non-metric units at the touch of a key. See balance model
	<b>Weighing with tolerance range:</b> Upper and lower limiting can be programmed individually, e.g. dosing /sorting.
	<b>Spray and dust protection:</b> Protection class is indicated in the symbol.
	<b>Underfloor weighing:</b> Load support with hook on the underside of the balance.
	<b>Accu-supply:</b> Rechargeable set.
	<b>Mains adapter:</b> 230 V / 50 Hz. Standard type D, if requested also available in standard GB, AUS or USA.
	<b>Mains Part:</b> Mains part integrated in the balance. 230 V/50 Hz in Germany. Upon request also in standard GB, AUS or USA
	<b>Tare:</b> Put back displayed value to "0" during weighing process, e.g. to add or remove weighing material from a container.
	<b>Animal weighing programme :</b> Strong vibrations are filtered out.

## Kern Electronic Balances

Kern is world renowned German manufacturer of balances and scales with 160 years of manufacturing experience and is specialized in accurate weighing, accredited to the latest standard DIN ISO 9001:2000. The KERN brand stands for precision and reliability.

The product range is very wide and competitive and includes balances from the small pocket balance to the heavy load industrial balance. There is a large selection of analytical, laboratory, pocket, industrial, hanging and counting balances as well as moisture analyzers. Availability of entry level balances of world standard & quality for school & colleges at affordable price is an important factor to note.

Kern uses appropriate technology for its product range. For example the high end precision analytical and moisture balances use Mono-Block technology / Magnetic force compensation technique, type EW/EG, 470/474 and EC incorporate tuning force measuring system known for reliability and stability needed in some application areas and many other inexpensive but sturdy models use load cell principle.

Another strength of KERN is the production of precision test weights in all fault tolerance categories ( E1, E2, F1, F2, M1, M2, M3)- important tools for checking of your measuring instruments within the scope of quality assurance provision in accordance with ISO9000ff. These weights and balances can be supplied with DKD (German) calibration certificate or calibration certificate from Indian accredited laboratory. Details in this regard will be furnished on request.

The products are brought to you by Riviera Glass Pvt Ltd as exclusive distributor in India with assured service support.



only ABJ



only ABS



only with statistics printer



### KERN ABS • ABJ Analytical balance

- Optional Extra :
- Statistics printer
  - Standard printer
  - Density determination kit
  - DKD certificate



Cat No.	Model KERN (with <i>external</i> calibration)	Read out 'd' mg	Weighing range gm	Reproducibility mg	Linearity mg	Maximum. price/Pc. Rs.
1001 1204*	ABS 120-4	0.1	120	0.1	±0.2	99000.00
1001 2204*	ABS 220-4	0.1	220	0.1	±0.2	110880.00
<i>(with internal calibration)</i>						
1026 1204*	ABJ 120-4M	0.1	120	0.1	±0.2	112200.00
1026 2204*	ABJ 220-4M	0.1	220	0.1	±0.2	121440.00

*Note : (\* These Models would be available only till stock lasts)*



only ACJ



only ACS



### KERN ACS • ACJ Analytical balance

Entry level analytical balance with high-quality single cell weighing system

#### Technical data

- Large LCD display, digit height 14 mm
- Dimensions of weighing plate ø 91 mm
- Overall dimensions WxDxH 210x340x325 mm
- weighing space WxDxH 174x162x227 mm
- Permissible ambient temperature 10°C / 30°C
- Net weight approx. 6 kg

#### Single-cell advanced technology:

- **Fully automatic manufactured weighing cell from one piece of material**
- **Stable temperature behaviour**
- **Short stabilisation time:** Steady weight values within approx. 3 sec under laboratory conditions
- **Shock proof construction**
- **High corner load performance**

Cat No.	Model KERN (with <i>external</i> calibration)	Read out 'd' mg	Weighing range gm	Reproducibility mg	Linearity mg	Maximum. price/Pc. Rs.
1030 0120	ACS 120-4	0.1	120	0.2	±0.3	97200.00
1030 0220	ACS 220-4	0.1	220	0.2	±0.3	108000.00
<i>(with internal calibration)</i>						
1031 0120	ACJ 120-4M	0.1	120	0.2	±0.3	109200.00
1031 0220	ACJ 220-4M	0.1	220	0.2	±0.3	118800.00







### KERN KB Precision balance

- Optional Extra :
- Statistics printer
  - Standard printer
  - Rechargeable battery pack



Ring Shaped draft shield  
only with KB 120-3  
& KB 200-3

Cat No.	Model KERN	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Weighing Plate mm	Maximum price/Pc. Rs.
1022 0120	KB 120-3N	0.001	121	0.001	± 0.003	Ø 81	34320.00
1022 0240	KB 240-3N	0.001	200	0.001	± 0.003	Ø 81	35640.00
1022 1200	KB 1200-2N	0.01	1210	0.01	± 0.03	130 x 130	31680.00
1022 2000	KB 2000-2N	0.01	2010	0.01	± 0.03	130 x 130	34320.00
1022 0010	KB 10000-1N	0.1	10100	0.1	± 0.3	150 x 170	30360.00

### KERN 572 Precision balance

- Optional Extra :
- Statistics printer
  - Standard printer
  - DKD certificate
  - Rechargeable Battery Pack

Weighing plate sizes :  
Models with d = 0.001 g: 128 x 128 mm  
Models with d = 0.01 g: 165 x 165 mm



572-31 & 572-32  
with Glass Draft  
Shield (optional)



Ring Shaped draft shield  
(standard) only with  
572-31 & 572-32

Cat No.	Model KERN	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Weighing Plate	Maximum price/Pc. Rs.	
1023 0241	572-30	0.001	241	0.001	± 0.003	Ø 105	51500.00	
1023 0301	572-31	0.001	301	0.001	± 0.003	Ø 105	52500.00	
1023 0421	572-32	0.001	421	0.001	± 0.003	Ø 105	55000.00	
1023 1610	572-33	0.01	1610	0.01	± 0.03	Ø 150	51000.00	
1023 2410	572-35	0.01	2410	0.01	± 0.03	Ø 150	51000.00	
1023 3010	572-37	0.01	3010	0.01	± 0.03	Ø 150	52000.00	
1023 1210	572-45	0.1	12100	0.05	± 0.15	160 x 200	52000.00	
1023 0016	572-49	0.1	16100	0.1	± 0.3	160 x 200	51000.00	
1023 0024	572-57	0.1	24100	0.1	± 0.3	160 x 200	52000.00	
1023 0501	572-A05	Glass draft shield for Models 572 with d=0.001 g						19800.00



only EG-N



only EW-N



only with statistics printer



only with statistics printer



### KERN EW • EG • (N)

Precision balance

#### Optional Extra :

- Statistics printer
- Standard printer
- DKD certificate
- Rechargeable battery pack



#### Weighing plate sizes :

Models with d = 0.001 g: Ø 118 mm

Models with d = 0.01 g:

170 x 142 mm (EW 820-2 NM)

180 x 160 mm (EG 2200-2 NM)

Cat No.	Model KERN (with <i>external</i> calibration)	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Maximum. price/Pc. Rs.
1003 0220	EW 220-3 NM	0.001	220	0.001	±0.002	79200.00
	(with <i>internal</i> calibration)					
1003 0221	EG 220-3 NM	0.001	220	0.001	±0.002	92400.00

**Note :** Draft Shield shown in the picture is provided with opening for using a pipette only with Model EW 220-3 NM & EG 220-3 NM .  
INTERNAL ADJUSTMENT CONTROL CAL via rotary control on the side (Model EG-N)  
Additional models are available up to max. weighing range 12000g. Offer on request

### KERN 440

Economical top loading precision balance



#### Weighing plate sizes :

Models with d = 0.001 g: Ø 81 mm

with draft shield Ø 90 mm, Ht. 40 mm

Models with d = 0.01 g: Ø 105 mm

Models with d = 0.1 g (except 440-49N): 130 x 130 mm

Model 440-49N with d= 0.1 g: 150 x 170 mm

Models with d = 0.2 g & 1.0 g: 150 x 170 mm

#### Optional Extra :

- Statistics printer
- Standard printer
- DKD certificate
- Rechargeable battery pack



Cat No.	Model KERN	Read out 'd' g	Weighing range g	Linearity g	Maximum. price/Pc. Rs.
1005 0060	440-21 A	0.001	60	±0.003	37125.00
1005 0200	440-33 N	0.01	200	±0.02	31625.00
1005 0400	440-35 N	0.01	400	±0.03	37125.00
1005 0401	440-43 N	0.1	400	±0.2	20625.00
1005 1000	440-45 N	0.1	1000	±0.2	26125.00
1005 2000	440-47 N	0.1	2000	±0.2	27500.00
1005 4001	440-49 N	0.1	4000	±0.3	34375.00
1005 4000	440-51 N	1.0	4000	±2	17250.00
1005 6000	440-53 N	1.0	6000	±2	19250.00

**Note :** Battery operation possible. Mono-block battery (9 V). Auto -Off function after 3 minutes without change of load to preserve the battery  
Balances with internal rechargeable battery pack can be supplied only with specific order.  
Incorporation is possible at the time of manufacturing only.



Option



## KERN EMB

Entry level balances  
for school & colleges



### MODEL EMB

- Batteries included
- Mains Adapter optional at extra cost
- Weighing plate size Ø 105 mm (EMB 200-2, EMB 600-2) & Ø 150 mm (other models)
- Auto Off function after 3 minutes without change of load
- Mains Adapter (Optional)

Cat No.	Model KERN	Read out 'd' g	Weighing range g	Reproducibility g	Line rity g	Maximum. price/Pc. Rs.
1007 0200	EMB 200-2	0.01	200	-	-	13925.00
1007 0600	EMB 600-2	0.01	600	-	-	17820.00
1007 0500	EMB 500-1	0.1	500	-	-	5845.00
1007 1200	EMB 1200-1	0.1	1200	-	-	8850.00
1007 2200	EMB 2200-0	1	2200	-	-	5720.00
1007 5200	EMB 5.2K1	1	5200	-	-	7000.00
1007 5201	EMB 5.2K5	5	5200	-	-	5800.00
1000 0531	Mains adapter					2600.00



## KERN TCB • TCE

Pocket balance

### Features :

- Small and handy
- Button batteries (2 x LR 44)  
Auto Off function after 3 minutes without change of load
- Weighing plate rotatable as overload protection (Model TCB)



## KERN CM

Pocket balance

### Features :

- Lift up lid as protection against pressure and dust
- Integrated pocket calculator
- Batteries (2 x 1.5 V AAA)  
Auto Off function after 4 minutes without change of load

Cat No.	Model KERN	Read out 'd' g	Weighing range g	Maximum. price/Pc. Rs.
1013 0200	TCB 200-1	0.1	200	6000.00
1015 0060	CM 60-2N	0.01	60	9240.00
1015 0150	CM 150-1N	0.1	150	6250.00
1015 0320	CM 320-1N	0.1	320	6500.00
1015 1000	CM 1K1 N	1.0	1000	7000.00



Option



## KERN ECB • EOB Platform scales



### MODEL ECB

- Extremely flat construction, only 60 mm height
- Ideally suited for mobile use
- Battery operation (6 x 1.5V AA) possible
- Rechargeable battery pack optional, at extra cost
- Weighing plate size 320 x 260 mm

### MODEL EOB

- Wall mounting for the display device
- Battery operation (6 x 1.5V AA) possible
- Further weighing unit : lb
- Weighing plate size 310 x 300 mm
- Ideally suited for dispatch department



Cat No.	Model KERN	Read out 'd' g	Weighing range kg	Reproducibility g	Linearity g	Maximum price/Pc. Rs.
1008 2010	ECB 20K 10	10	20	10	±20	16500.00
1008 5020	ECB 50K 20	20	50	20	±400	16500.00
1009 3510	EOB 35K 10	10	35	10	±20	18000.00
1009 6020	EOB 60K 20	20	60	20	±40	18000.00



## KERN FCB Bench Scale



### Features

- **Second display** on the rear of the balance
- **PRE-TARE** function for manual subtraction of a known container weight, useful for checking fill-levels
- **UNITS:** Further weighing units see the internet

### Technical data

- Backlit LCD display, digit height 25 mm
- Dimensions of weighing plate (stainless steel)  
W x D 252 x 228 mm
- Overall dimensions W x D x H — 270 x 345 x 106 mm

Cat No.	Model KERN	Read out 'd' g	Weighing range kg	Reproducibility g	Linearity g	Min. Piece count wt. g/pc	Maximum price/Pc. Rs.
1010 0103	FCB 3 K 0.1	0.1	3	0.1	±0.3	0.2	24750.00
1010 0106	FCB 6 K 0.5	0.5	6	0.5	±1.5	1.0	22500.00
1010 0112	FCB 12 K 1	1.0	12	1.0	±3.0	2.0	21000.00



## KERN CH • HCB Hanging scale



### KERN CH

- Features :**
- Data hold function
  - Stainless steel hook
  - Tape measure extractable (100 cm)
  - Block batteries (9 V)  
Auto off after 3 minutes without change of load



### KERN HCB

- Features :**
- Data hold function
  - Stainless steel hook
  - Stainless steel snap link
  - Batteries (3 x 1.5 V AA)  
Auto off after 3 minutes without change of load

Cat No.	Model KERN	Read out 'd' g	Weighing range kg	Maximum price/Pc. Rs.
1017 0015	CH 15K 20	20	15	7130.00
1017 0050	CH 50K 50	50	50	7700.00
1017 0051	CH 50K 100	100	50	7100.00
1018 0200	HCB 200K 500	500	200	13000.00



## KERN PFB Precision balance

Low-cost model based on a concept of easy use

### Features

- **Concept of easy use:** All primary functions have their own key on the keypad.
- **Compact size,** practical for small spaces.
- **Capacity display:** A bar lights up to show how much of the weighing range is still available.
- **Level indicator and foot screws** to level the balance precisely, fitted as standard, to give the most accurate weighing results,
- **Draft shield** standard (for models with weighing plate sizes A and B ).  
Removable metal cover with pipette opening.  
Weighing space WxDxH 158x143x64 mm

### Technical data

- Backlit LCD display, digit height 15 mm
- Dimensions of weighing plate (stainless steel)

A — Ø 80 mm

B — Ø 120 mm



Cat No.	Model KERN	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Weighing Plate mm	Maximum price/Pc. Rs.
1029 0120	PFB 120-3	0.001	120	0.001	± 0.003	Ø 80	29000.00
1029 0200	PFB 200-3	0.001	200	0.001	± 0.003	Ø 80	31500.00
1029 0300	PFB 300-3	0.001	300	0.001	± 0.003	Ø 80	33000.00
1029 1200	PFB 1200-2	0.01	1200	0.01	± 0.03	Ø 120	24500.00





**Test weights :**

Single as well as set of test weights are available in stainless steel or nickel plated brass. They can be supplied with German DKD certificate or locally with ERTL / NPL traceability, at extra cost.

Single weight Stainless Steel Class, E2

Cat. No.	Description	Price/Pc Rs.
1000 0535	1 g in box	6760.00
1000 0536	2 g in box	7175.00
1000 0537	5 g in box	7590.00
1000 0538	10 g in box	7866.00
1000 0539	20 g in box	8830.00
1000 0540	50 g in box	10200.00
1000 0541	100 g in box	10900.00
1000 0542	200 g in box	13800.00
1000 0543	500 g in box	23040.00
1000 0544	1 kg in box	33120.00
1000 0545	2 kg in box	52440.00
1000 0546	5 kg in box	74520.00
1000 0547	10 kg in box	117300.00
1000 0548	20 kg in box	204240.00
1000 0549	50 kg in box	383640.00

Single weight Nickel Plated Brass, Class F1

Cat. No.	Description	Price/Pc Rs.
1000 0551	1 g in box	3150.00
1000 0552	2 g in box	3315.00
1000 0553	5 g in box	3515.00
1000 0554	10 g in box	3865.00
1000 0555	20 g in box	4140.00
1000 0556	50 g in box	4490.00
1000 0557	100 g in box	4970.00
1000 0558	200 g in box	7842.00
1000 0559	500 g in box	9520.00
1000 0560	1 kg in box	13660.00
1000 0561	2 kg in box	20000.00
1000 0562	5 kg in box	35880.00
1000 0563	10 kg in box	66240.00
1000 0564	20 kg in box	165600.00
1000 0565	50 kg in box	276000.00

Weight Set, Stainless Steel, in plastic carrying case, Class E2

Cat. No.	Description	Price/Set Rs.
1000 0571	Range 1 mg - 200 g	140760.00

Weight Set, Nickel Plated Brass, in plastic carrying case, Class F1

Cat. No.	Description	Price/Set Rs.
1000 0581	Range 1 mg - 200 g	85560.00

**Note :** Weight boxes and weights in other ranges and class E1, E2, F1, F2, M1, M2 & M3 are also available. Details / Price on Request

## DIAPHRAGM TYPE COMPRESSORS CUM VACUUM PUMPS



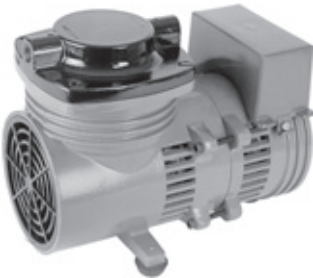
7001 0001



7001 0002



7001 0004



7001 0006



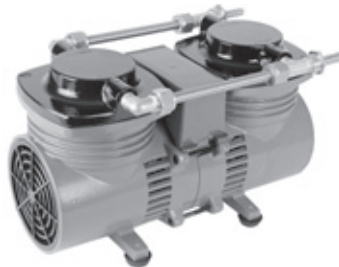
7001 0007



7001 0008



7001 0009



7001 0010



7001 0012



21202 500

### Warranty Clause for Vacuum Pumps:

The above equipment is warranted with following conditions:

- All Rivotek, vacuum pumps will carry warranty of 12 months from the date of invoice against manufacturing defects. The company will repair or replace the parts going defective free of cost during the warranty period. The warranty for electric/electronic parts dose not hold good if the equipment is connected to fluctuating mains voltage beyond  $\pm 10\%$  of the standard supply voltage i.e. 230v, 50hz.
- Malfunctioning of the pump caused due to entry of foreign material inside the pump is not covered under warranty.
- Warranty is not applicable to damages occurring due to accident, negligence and misuse by the user.
- Complaints should be communicated to the warrantor in writing.

**FOR YOUR VACUUM & PRESSURE APPLICATIONS**



## COMPRESSORS CUM VACUUM PUMPS

Portable, Oil-free vacuum pumps

Salient Features:

- No Lubrication required
- Noiseless
- Absolutely portable
- Totally oil free construction
- Practically maintenance free
- All parts made from Special graded aluminium die cast. Material for light weight and good strength
- Diaphragms are made of special 2 ply Nylon, reinforced neoprene rubber
- Special diaphragms are available (Teflon, Viton) on request at extra cost.
- Valves made of SS 316 material
- Built in micro suction filter
- Extra Large bearings for trouble free and smooth running
- Pumps available with single as well as three phase motors.
- Pumps available with flame proof motors (Cat. No. 7001 0012)
- Pumps available with 12/24/48 volts DC supply (Cat no.7001 0011). Please specify voltage while ordering
- Pumps available with Chemical resistive parts( PP, Teflon contact parts) ( Cat. No. 7001 0007/8)

Cat No.	Features	Max Flow LPM	Max Press. PSIG	Max. Vac. Inch Hg	Motor HP	Approx. Weight kg	Approx. Dimensions mm	Maximum Price Rs/Pc
7001 0001	Single stage &	15	25	22	1/20	2.7	175 x 110 x 140	7850.00
7001 0002	Single stage & reduced dimensions	15	25	22	1/20	2.5	150 x 110 x 140	7850.00
7001 0004	Double stage in parallel	25	25	22	1/16	4.2	220 x 120 x 140	10200.00
7001 0006	Single stage	45	40	22	1/8	6.2	220 x 120 x 180	11800.00
7001 0007	Chemical resistive Parts	30	10	22	1/8	5.8	235 x 155 x 200	14000.00
7001 0008	Chemical resistive Parts	50	10	22	¼	8.7	325 x 155 x 200	19750.00
7001 0009	Double stage in series	45	60	27	¼	9.0	290 x 120 x 180	15500.00
7001 0010	Double stage in parallel	75	40	22	¼	9.0	290 x 120 x 180	15500.00
7001 0012	Flame Proof Motor	45	35	22	¼ (FPM)*	18.0	325 x 150 x 250	28000.00

### Applications as vacuum pump

- Laboratories
- Pollution control equipments
- Material handling equipments
- Desoldering station
- Medical instruments
- Dentists
- Chemical analysis
- Suction machines
- Photographic developing machines

### Applications as compressor

- Flame photometer
- Agitation of chemicals in electro-plating
- Agitation of film in drying tank
- Oil-free spray painting
- Artist air brush
- Operating small pneumatic tools
- Laminating press
- Nebuliser
- Plastic welding

**Note :** 1. Vacuum gauge and regulator are fitted with Cat. No. 21202 500 only as standard supply. Moisture trap if required will be supplied at extra cost. For specific application mentioned above other than general laboratory use, please consult Riviera Mumbai office before ordering. 2. Avoid using the pump to handle air with heavy dust & organic, acidic or basic vapors. 3. The values of max pressure, max vacuum & max flow mentioned above are measured very close to the pump head within tolerance of  $\pm 3\%$ . The mechanical gauge wherever supplied carries reading accuracy of  $\pm 1$  division and not covered under warranty. 4. Add Rs. 2500.00 for teflon diaphragm & Rs. 3500.00 for viton diaphragm in lieu of neoprene diaphragm for Cat No. 21202 500 pump.

### Optional Accessories

Cat No.	Description	Maximum Price Rs/Pc
7001 0513	Vacuum gauge and regulator	1025.00
7001 0514	Pressure gauge and regulator	1025.00



## BATHS AND CIRCULATORS

### Water Bath with Circulator, Rivotek

Body Material - MS Painted with Powder coating • Bath inner material - SS 304. • Digital display with microprocessor based PID Controller to  $\pm 1.0$  °C accuracy by using PT 100 sensor. • Temperature Range ambient to 95 °C • Fitted with Circulator for uniformity of temperature inside the Bath.



Cat No.	Temp. Range °C	Working Space (including circulator) mm		No. of Rack	Maximum Price Rs/Pc
50121 001	Amb. to 95 °C	300 x 175 x 160	SS Gabled	2	24485.00
50121 002	Amb. to 95 °C	350 x 300 x 160	SS Flat	Not provided	27110.00

Note: - For supplying the racks, test tube dimensions have to be mentioned.

### Standard size of Test Tube for Water Bath Circulator is give below

Rack 1		Rack 2		
0.5 ml	1.5 ml	13 mm	16 mm	19 mm
15 Holes	10 Holes	8 Holes	3 Holes	3 Holes

### Circulator for Water Bath, Rivotek

Portable device with Pump. Digital display with microprocessor based PID Controller temperature. Temperature ranges from ambient to 80 °C and is controlled to  $\pm 1.0$  °C using PT-100 as sensor. Circulator is supplied without metal or glass tank.

Note: For using the above circulator, the bath or tank should have a minimum depth of 160 mm and the volume of water should be 15 to 20 Liters.



Cat No.	Maximum Price Rs/Pc
50121 501	16325.00

### Water Bath with Outbath Circulation, (Rear View) Rivotek

Cat No.	Temp. Range °C	Working Space (including circulator) mm	Cover	Outbath Circulation	Maximum Price Rs/Pc
50121 0015	Amb. to 95 °C	300 x 175 x 160	SS Gabled	Provided	25650.00
50121 0025	Amb. to 95 °C	350 x 300 x 160	SS Flat	Provided	29150.00



### Oil Bath, Rivotek

Bath Material - SS 316, Single walled without insulation, Heater material used in Bath - SS 316, Bakelite Handles are provided to bath. Temperature range Ambient +5 to 200 °C by separate temperature control unit with  $\pm 1.0$  °C accuracy controlled by microprocessor based **PID Controller** using a PT-100 sensor. A unit can be kept 2 mtrs away from the oil bath. Oil bath can be used for heating round bottom glass flasks .



Cat No.	Capacity Litres	Dimensions Dia x Depth mm	Maximum Price Rs/Pc
50131 001	1	165 x 90	14265.00
50131 002	2	205 x 115	15360.00
50131 003	3	225 x 130	16170.00
50131 004	5	270 x 155	17790.00
50131 005	10	335 x 190	20500.00
50131 006	20	400 x 220	23680.00

## HEATING BLOCK



### Heating Block, Rivotek

Temperature range ambient to 100 °C controlled to  $\pm 1.0$  °C by digital display with microprocessor based PID Controller display using PT 100 as sensor.

The body made of heavy M S painted with Epoxy Powder Paint.  
The front panel is provided with an Acrylic door with lock and key.



Cat No.	Capacity	Maximum Price Rs/Pc
50031 001	Heating Block with 3 nos. interchangeable aluminium blocks of 75 x 50 x 50mm size for accommodating 0.5ml., 1.5ml Eppendorf & 12mm test tubes.	16910.00
50031 003	Heating Block with 3 nos. interchangeable aluminium blocks of 75 x 50 x 50mm size for accommodating 0.5ml., 1.5ml Eppendorf & 16mm test tubes.	16910.00
50031 004	Heating Block with 3 nos. interchangeable aluminium blocks of 75 x 50 x 50mm size for accommodating 0.5ml., 1.5ml Eppendorf & 19mm test tubes.	16910.00
50031 005	Single Heating Block with 150 x 75 x 50mm size accommodating 50 tubes of 10mm Dia. for LAL test	16910.00
50031 002	Single Heating Block with 150 x 100 x 50mm size accommodating 60 tubes of 10mm Dia. for LAL test	19120.00

**Note:** Blocks for using with any other test tubes can be supplied as per specific requirements at extra cost.  
Please mention the dimensions of the tubes while placing the order.

## HOT PLATES



**Hot Plate Round – RIVOTEK :** Round surface heating plate, body made of MS Powder coated. Top Plate made of cast iron. Temp upto 350°C Fitted with Thermostatic Control.

Cat No.	Dimension in inches	Rating in kW	Maximum Price Rs/Pc
50020 0008	8	1.2	7600.00
50020 0009	9	1.5	11000.00
50020 0012	12	2.0	13600.00



**Hot Plate Rectangular – RIVOTEK :** Rectangular surface heating plate, body made of MS Powder coated. Top Plate made of cast iron. Temp upto 350°C Fitted with Thermostatic Control.

Cat No.	Dimension in inches	Rating in kW	Maximum Price Rs/Pc
50021 1012	10 x 12	1.0	10600.00
50021 1016	10 x 16	1.2	12000.00
50021 1218	12 x 18	2.0	14000.00
50021 1824	18 x 24	3.0	24000.00

## HEATING MANTLES & EXTRACTION (KJELDAHL) APPARATUS

**Heating Mantles, Rivotek :** Decently painted Aluminium metal body up to 20 ltrs., MS body for 50, 100 & 200 ltrs. with energy regulator, switch and indicating lamp.

Cat No.	Model	Capacity ml	Watts	Voltage	Maximum Price Rs/Pc
9000 0001	Heating Mantels with Energy Regulator	50	60	230	1750.00
9000 0002	Heating Mantels with Energy Regulator	100	60	230	1805.00
9000 0003	Heating Mantels with Energy Regulator	250	85	230	1975.00
9000 0004	Heating Mantels with Energy Regulator	500	150	230	2200.00
9000 0005	Heating Mantels with Energy Regulator	1,000	200	230	2370.00
9000 0006	Heating Mantels with Energy Regulator	2,000	300	230	2455.00
9000 0007	Heating Mantels with Energy Regulator	3,000	450	230	2935.00
9000 0008	Heating Mantels with Energy Regulator	5,000	2 x 300	230	3500.00
9000 0009	Heating Mantels with Energy Regulator	10,000	2 x 600	230	4630.00
9000 0010	Heating Mantels with Energy Regulator	20,000	3 x 665	230	6490.00



**Extraction and Kjeldahl Apparatus for research laboratories, Rivotek**  
Available with 4 & 6 heaters with energy regulator control. MS construction, decently painted.

Cat No.	Capacity ml	No. of Controls	Watts	Maximum Price Rs/Pc
9001 0001	100 – 150	4	400	8465.00
9001 0002	200 – 500	4	600	9145.00
9001 0003	500	4	800	9595.00
9001 0004	1000	4	1200	11400.00
9001 0006	100 – 150	6	600	10500.00
9001 0007	200 – 500	6	900	10670.00
9001 0008	500	6	1200	12300.00
9001 0009	1000	6	1800	14560.00



**Bench Top Incubator, Rivotek**

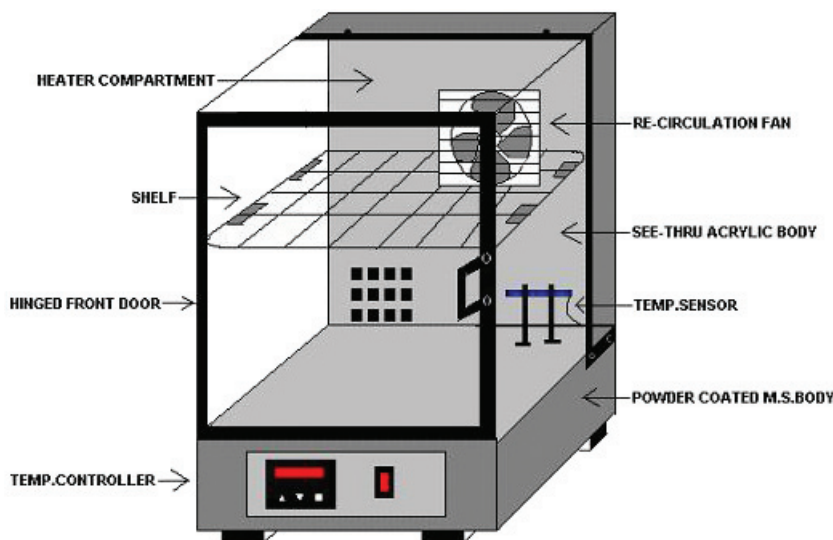
Acrylic Single Walled see through type.

Temperature Range – (Ambient+5) to 60 °C

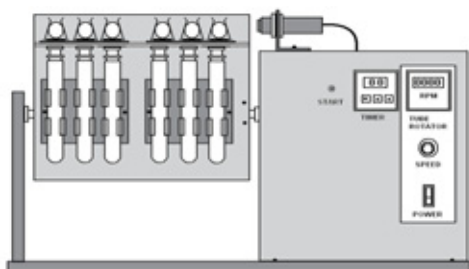
Digital display with microprocessor based PID Controller with PT 100 sensor. Accuracy ±1.0 °C.

The recirculation fan fitted inside achieves uniformity of Temperature.

Working Chamber size – 275 x 275 x 250 mm



Cat No.	Maximum Price Rs/Pc
50151 001	20210.00



**Test Tube Rotator, Rivotek**

Speed Variable from 5 - 50 RPM (Without Load)

Permanent magnet DC geared motor.

Noise-free silent operation.

Constant current speed control circuit for steady speed.

Powder coated M.S.body.

**(Note : While placing the order, please specify the dimensions of the tubes you propose to use as per details given below)**

Cat No.	Description	Maximum Price Rs/Pc
50022 001	Test Tube Rotator with 0.5 ml Eppendorf tubes 24 Nos. & 1.5 ml Eppendorf tubes 24 Nos.	15130.00
50022 002	Test Tube Rotator with Ø 16/19 mm Test tubes 12 Nos.	15130.00
50022 003	Test Tube Rotator with Ø 30 mm Test tubes 8 Nos.	15130.00

**Optional Accesories for Test Tube Rotator, RIVOTEK**

Cat No.	Description	Maximum Price Rs/Pc
50022 501	Digital Timer (0 - 99 min)	7000.00
50022 502	Digital RPM	7000.00

### Universal Cell-Mixer, Plate Type, Rivotek

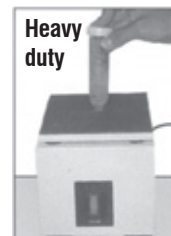
Suitable for mini tissue culture work and blood suspensions without sedimentation or foaming.  
 Also suitable for vigorous agitation and end to end mixing.  
 Tubes can be mounted at any angle from horizontal to vertical, tubes with respect to axis of rotation.  
 Different sizes from 12 mm to 25 mm dia can be accommodated.  
 Speed Variable 5 - 50 rpm (without load)



Cat No.		Maximum Price Rs/Pc
50023 001	Universal Cell Mixer with 0.5 ml (Ø 8 mm) Eppendorf tubes 12 Nos.	12700.00
50023 002	Universal Cell Mixer with 1.5 ml (Ø 11 mm) Eppendorf tubes 12 Nos.	12700.00
50023 003	Universal Cell Mixer with Ø 13 to 27 mm Test tubes 8 Nos.	12700.00

### Vortex Mixer, Rivotek

Cat No.	Type	Used for	Speed in RPM	Maximum Price Rs/Pc
50141 001	Light duty-cup type	Tubes & small vials	Variable Speed 200 - 2800	6350.00
50141 002	Heavy duty-platform type with 150 x 150 mm size	Tubes & bottles / flasks	Approx. Speed 2800	6930.00



## INCUBATORS & SHAKERS

### Incubator - Shakers, Rivotek

Temp. Range (Ambient +5) to 60 °C  
 Digital display with microprocessor based PID Controller with PT 100 sensor having resolution ±1.0 °C and accuracy ±1°C. Fitted with re-circulation fan to maintain temperature uniformity.  
 Transparent acrylic cover allows unobstructed view of the chamber contents from front, from two sides and from top.  
 The body material is MS powder coated; inner walls of the incubator will be pasted with laminated sheets to avoid heat loss. Tray material is SS.  
 Drive mechanism is powered by Permanent Magnet Geared DC motor.



### Incubator with Microplate Shaker Mechanism, Rivotek

Cat No.	Tray size in mm	Chamber Size in mm	Stroke Length	Stroke Speed per min.	Maximum Price Rs/Pc
50092 001	180 x 150 2 plates of 96 wells can be placed.	280 x 280 x 75	1 mm dia. orbit	100 to 1500	23100.00

**Incubator with Orbital Shaker Mechanism, Rivotek**


Cat No.	Tray size in mm	Chamber Size in mm	Speed Indication	Stroke Length	Stroke Speed per min. (without load)	Maximum Price Rs/Pc
50082 001	325 x 325	400 x 400 x 300 ht	No	25 mm dia.	20 to 200	38690.00
50082 002	325 x 325	400 x 400 x 300 ht	Yes	25 mm dia.	20 to 200	48510.00
50082 003	425 x 425	500 x 500 x 300 ht	No.	25 mm dia.	20 to 200	55440.00
50082 004	425 x 425	500 x 500 x 300 ht	Yes	25 mm dia.	20 to 200	65835.00

Note : SS Lotus clamps for holding the flasks in the above shakers to be ordered separately (listed below)


**Orbital Shaker, Rivotek**

Body Material is MS painted with Epoxy Powder.

Tray Material is SS.

Shaking speed: 20-200 Orbital strokes per min. (without load)

Permanent Magnet Geared DC motor with 25 mm dia. motion is used

Cat No.	Tray size in mm	Digital Speed Indication	Maximum Price Rs/Pc
50081 001	325 x 325	No	14840.00
50081 002	425 x 425	No	28585.00
50081 003	325 x 325	Yes	25410.00
50081 004	425 x 425	Yes	37540.00

Note: SS Lotus clamps for holding the flasks in the above shakers to be ordered separately (listed below)


**Reciprocating Shaker, Rivotek**

Body Material is MS painted with Epoxy Powder.

Tray Material is SS.

Shaking speed: 10-200 strokes per min. (without load)

Permanent Magnet Geared DC motor with 35 mm stroke length is used

Cat No.	Tray size mm	Maximum Price Rs/Pc
50101 001	325 x 325	16170.00
50101 002	425 x 425	28585.00

Note: SS Lotus clamps for holding the flasks in the above shakers to be ordered separately (listed below)

**Compulsory Accessories**

Spring loaded SS lotus clamps (removable) for holding the Flasks in Orbital and Reciprocating Shakers to be ordered separately

Cat No.	Flask capacity in ml	No. of SS Lotus Clamp required for tray size		Maximum Price Rs/Pc
		325 x 325 mm	425 x 425 mm	
50081 501	50	16	25	155.00
50081 502	100	16	25	165.00
50081 503	250	8	16	175.00
50081 504	500	8	16	200.00
50081 505	1000	4	8	280.00
50081 506	2000	3	6	330.00



#### Optional Accesories for Orbital / Reciprocating Shaker, RIVOTEK

Cat No.	Description	Maximum Price Rs/Pc
50022 501	Digital Timer (0 - 99 min)	7000.00

#### Water Bath Shakers, Rivotek

Body Material — MS Painted with powder coating.

Tray material — Stainless Steel. SS cover is provided.

Temp. Range (Ambient +5) to 95 °C

Digital Display with microprocessor based PID Controller of Accuracy  $\pm 1^{\circ}\text{C}$ .by using PT 100 as sensor

Shaking speed 20 - 200 / 10-100 stroke per min. (without load)

Supplied with SS Gabled Cover.



Cat No.	Type	Tank size in mm	Tray size in mm	Stroke Speed per min.	Maximum Price Rs/Pc
50111 001	Reciprocating (Horizontal)	350 x 300 x 160 ht	250 x 250 x 110 ht	10 -100	32340.00
50111 002	Reciprocating (Horizontal)	450 x 350 x 160 ht	350 x 300 x 110 ht	10 -100	46000.00
50111 003	Orbital	400 x 375 x 250 ht	325 x 325	20 -200	51400.00

Note: SS Lotus clamps for holding the flasks in the above shakers to be ordered separately (listed below)

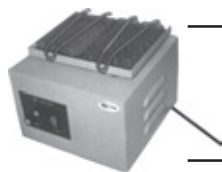
#### Compulsory Accessories

##### Spring loaded SS lotus clamps (removable) for holding the Flasks in the Water Shakers to be ordered separately

Cat No.	Flask capacity in ml	No. of SS Lotus Clamp required for tray size			Maximum Price Rs/Pc
		250 x 250 mm	325 x 325 mm	350 x 350 mm	
50081 501	50	9	16	20	155.00
50081 502	100	9	16	20	165.00
50081 503	250	5	8	9	175.00
50081 504	500	4	8	6	200.00
50081 505	1000	-	4	-	280.00

#### Optional Accesories for Water Bath, RIVOTEK

Cat No.	Description	Maximum Price Rs/Pc
50022 503	Digital Safety Controller	7000.00
50022 502	Digital RPM	7000.00


**Microplate Shaker, Rivotek**

Body Material is MS painted with Epoxy Powder. Tray Material is SS.  
Shaking speed: 100-1500 strokes per min  
Permanent Magnet Geared DC motor with 1mm dia. Orbital motion is used.

Cat No.	Tray size	Maximum Price Rs/Pc
50091 001	180 x 150 mm. With springs 2 multi well plates can be placed on the tray	9240.00

**Water Bath Double-walled - STD (Thermostatic Controlled)**

**Specifications**

- Inner chamber is made of thick gauge S.S. 304 grade sheet, with minimum joint. STD/GMP
- Outer MS with Powder Coating only for - STD model
- Outer made up of S.S. 304 grade sheet only for GMP model
- Specially made extra long heating elements for high heat dissipation, uniformity & longer life.
- The gap between the two walls is filled with glass wool.
- Lid is made up of S.S. 304 with 6 holes & 12 holes of 3" dia.
- Provided with indicating lamps and on/off switch.
- Temp range is above (Ambient to +5 to 99 °C)
- Operation on 240 volts AC

Cat No.	Size in inches	Holes	Watt	Inner Chamber	Outer Chamber	Maximum Price Rs/Pc
50192 000	14 x 10 x 4	6	1000	S. S. 304	MS Powder Coated	12000.00
50192 001	17 x 13 x 4	12	2000	S. S. 304	MS Powder Coated	17000.00
50191 000	14 x 10 x 4	6	1000	S. S. 304	S. S. 304	15000.00
50191 001	17 x 13 x 4	12	2000	S. S. 304	S. S. 304	21000.00

**Optional Accesories for Water Bath with Concentric Rings**

Cat No.	Description	Maximum Price Rs/Pc
50022 504	PID Controller	7000.00
50022 503	Digital Safety Controller	7000.00



## PERISTALTIC PUMP

### Peristaltic Pump, Rivotek

Single Channel

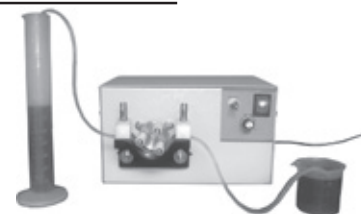
Body material- MS with Powder coating

Stage made up of cast aluminum with black epoxy powder paint

Rollers of cast Nylon

Supplied with 1 meter transparent silicon tube

Pumps with different flow rate are available



Cat No.	Flow Rates	Tube size mm	Maximum Price Rs/Pc
50171 001	6-60 ml/Hour	I. D. 1 / O. D. 3	17615.00
50171 002	10-80 ml/min	I. D. 2 / O. D. 4	16690.00
50171 003	80-650 ml/min.	I. D. 4 or 6 / O. D. 5 or 7	17700.00
50171 004	110-900 ml/min	I. D. 6 / O. D. 9	19845.00

### Optional Accessories for the above Peristaltic pump

Cat No.	Description	Maximum Price Rs/Mtr.
50171 501	<b>Silicone Tube</b> Size : 1 mm I.D/3mm O.D Flow Rate : 6 - 60 ml/Hour	80.00
50171 502	<b>Silicone Tube</b> Size : 2 mm I.D/4mm O.D Flow Rate : 10 - 80 ml/Min	100.00
50171 503	<b>Silicone Tube</b> Size : 5 mm I.D/7mm O.D Flow Rate : 80 - 650 ml/Min	225.00
50171 504	<b>Silicone Tube</b> Size : 6 mm I.D/9mm O.D Flow Rate : 110 - 900 ml/Min	355.00
50022 501	<b>Digital Timer</b> (0 - 99 min)	7000.00

### Rocking Platform, Rivotek

Body Material is MS painted with Epoxy Powder.

Tray Material is SS.

Shaking speed: 8-60 strokes per min. (without load)

Permanent Magnet Geared DC motor as driving mechanism is used

Tray Size in mm : 300 x 275 x 25



Cat No.	No. of Tiers	Maximum Price Rs/Pc
50051 001	1	12965.00
50051 002	2	14940.00



### Ultrasonic Cleaners, Rivotek

#### Specifications :

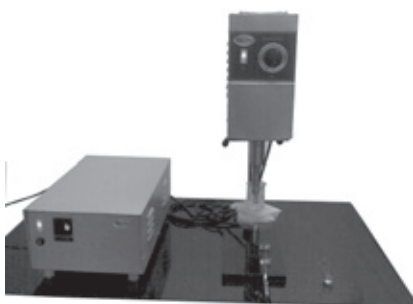
- Ultrasonic Generator: SMPS based Electronics
- Frequency : 30 ± 3 KHz
- Transducer : PZT crystals (Morgan Matrac U.K. make) bonded on the base of the tank with welbond technique.
- Lid : Provided in SS 304
- Temperature Control : By cut-off thermostat accuracy ± 3 °C preset at 60 °C
- Timer : 0-15 minutes timer is provided
- SS Basket : Provided
- Drain : Drain valve provided at the rear side of the tank (not included for 1.5 litre. Model)
- Electric supply : 230V/ 50Hz AC, single phase.

Cat No.	Tank Capacity in litres	Tank Clear Size in mm	Ultrasonic Power Watts	Heater Power Watts	Maximum Price Rs/Pc
1900 0015	1.5	225 x 125 x 60	50	120	17750.00
1900 0055	5.5	250 x 150 x 150	120	400	41000.00
1900 0090	9.0	300 x 200 x 150	250	400	58000.00
1900 0020	20.0	450 x 300 x 150	500	1500	109500.00

\* For more tank capacity above 20 litres P. O. R.

### Optional Accessories

Cat No.	Description	Maximum Price Rs/Pc
50022 505	Digital Timer (0 -15 min)	7000.00
50022 504	PID Controller	7000.00



### Ultrasonic Processor (Sonicator), Rivotek

#### Specifications :

- Ultrasonic Generator : Solid state design with auto-tuning
- Frequency : 30 KHz ± 3 KHz
- Ultrasonic Horn : Mounted on vertical stand with flat bed at the bottom of the stand
- Timer : 0-15 minutes timer is provided
- Probe : S.S. probe 15 mm dia (standard)
- Electric Supply : 230 V AC, 50Hz, single phase
- Ultrasonic Power : 120 Watts or 250 Watts

**Note : While placing the order, please specify the standard S.S. Probe tip as given below.**

Cat No.	Description	Maximum Price Rs/Pc
1700 0005	Ultrasonic Power 120 Watts with SS Probe Tip 5 mm	94000.00
1700 0008	Ultrasonic Power 120 Watts with SS Probe Tip 8 mm	94000.00
1700 0015	Ultrasonic Power 120 Watts with SS Probe Tip 15 mm	94000.00
1700 1008	Ultrasonic Power 250 Watts with SS Probe Tip 8 mm	126000.00
1700 1015	Ultrasonic Power 250 Watts with SS Probe Tip 15 mm	126000.00

**Note :** However, frequent replacement of probe tip is not recommended, since factory set frequency of vibrations may not match to spare probe if replaced on-site.



## OTHER RIVOTEK INSTRUMENTS

### Laboratory Oven - STD Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6400 0002	5 °C above ambient (room temp) to 250 ° C	14 x 14 x 14	35 x 35 x 35	Price on Request
6400 0003	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6400 0004	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6400 0005	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6400 0006	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request

### Hot Air Oven - Memmert Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6401 0002	5 °C above ambient (room temp) to 250 ° C	14 x 14 x 14	35 x 35 x 35	Price on Request
6401 0003	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6401 0004	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6401 0005	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6401 0006	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request

### Hot Air Oven - GMP Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6402 0003	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6402 0004	5 °C above ambient (room temp) to 250 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6402 0005	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6402 0006	5 °C above ambient (room temp) to 250 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request

### Vacuum Oven- Rectangular STD Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6701 0002	50 °C to 200 ° C	12 x 12 x 16	30 x 30 x 40	Price on Request
6701 0003	50 °C to 200 ° C	14 x 14 x 20	35 x 35 x 50	Price on Request
6701 0004	50 °C to 200 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6701 0005	50 °C to 200 ° C	20 x 20 x 30	50 x 50 x 75	Price on Request

### Vacuum Oven- Rectangular - GMP Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6702 0002	50 °C to 200 ° C	12 x 12 x 16	30 x 30 x 40	Price on Request
6702 0003	50 °C to 200 ° C	14 x 14 x 20	35 x 35 x 50	Price on Request
6702 0004	50 °C to 200 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6702 0005	50 °C to 200 ° C	20 x 20 x 30	50 x 50 x 75	Price on Request



**Vacuum Oven (Round)- STD Model, Rivotek**

Cat No.	Temp. Range	Chamber Size Dia x Depth in inches	Chamber Size Dia x Depth in cms	Maximum Price Rs/Pc
6601 0001	50 °C to 200 ° C	9 x 12	22 x 30	Price on Request
6601 0002	50 °C to 200 ° C	12 x 15	30 x 38	Price on Request

**Vacuum Oven (Round)- GMP Model, Rivotek**

Cat No.	Temp. Range	Chamber Size Dia x Depth in inches	Chamber Size Dia x Depth in cms	Maximum Price Rs/Pc
6602 0001	50 °C to 200 ° C	9 x 12	22 x 30	Price on Request
6602 0002	50 °C to 200 ° C	12 x 15	30 x 38	Price on Request

**Muffle Furnace Light Weight - STD Model, Rivotek**

Cat No.	Temp. Range	Muffle size D x L x W in inches	Muffle size D x L x W in cms	Maximum Price Rs/Pc
6901 0001	up to 1200 °C Working temperature up to 1150 °C	9 x 4 x 4	22 x 10 x 10	Price on Request
6901 0002	up to 1200 °C Working temperature up to 1150 °C	10 x 5 x 5	22 x 12 x 12	Price on Request
6901 0003	up to 1200 °C Working temperature up to 1150 °C	12 x 6 x 6	30 x 15 x 15	Price on Request

**Muffle Furnace Light Weight - GMP Model, Rivotek**

Cat No.	Temp. Range	Muffle size D x L x W in inches	Muffle size D x L x W in cms	Maximum Price Rs/Pc
6902 0001	up to 1200 °C Working temperature up to 1150 °C	9 x 4 x 4	22 x 10 x 10	Price on Request
6902 0002	up to 1200 °C Working temperature up to 1150 °C	10 x 5 x 5	22 x 12 x 12	Price on Request
6902 0003	up to 1200 °C Working temperature up to 1150 °C	12 x 6 x 6	30 x 15 x 15	Price on Request

**Bacteriological Incubator - STD Model, Rivotek**

Cat No.	Temp. Range	D x L x W in inches	D x L x W in cms	Maximum Price Rs/Pc
6500 0002	5 °C above ambient (room temp) to 60 ° C	14 x 14 x 14	35 x 35 x 35	Price on Request
6500 0003	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6500 0004	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6500 0005	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6500 0006	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request

**Bacteriological Incubator Memmert Model, Rivotek**

Cat No.	Temp. Range	D x L x W in inches	D x L x W in cms	Maximum Price Rs/Pc
6501 0002	5 °C above ambient (room temp) to 60 ° C	14 x 14 x 14	35 x 35 x 35	Price on Request
6501 0003	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6501 0004	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6501 0005	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6501 0006	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request



### Bacteriological Incubator GMP Model, Rivotek

Cat No.	Temp. Range	Chamber Size L x D x H in inches	Chamber Size L x D x H in cms	Maximum Price Rs/Pc
6502 0003	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 18	45 x 45 x 45	Price on Request
6502 0004	5 °C above ambient (room temp) to 60 ° C	18 x 18 x 24	45 x 45 x 60	Price on Request
6502 0005	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 24	60 x 60 x 60	Price on Request
6502 0006	5 °C above ambient (room temp) to 60 ° C	24 x 24 x 36	60 x 60 x 90	Price on Request

### B.O.D. Incubator - STD Model, Rivotek

Cat No.	Temp. Range	Volume Ltrs. / Cu. Ft.	Chamber Size W x D x H in cms	Maximum Price Rs/Pc
6101 0004	5 °C to 60 ° C	120 / 04	45 x 45 x 60	Price on Request
6101 0008	5 °C to 60 ° C	200 / 08	50 x 50 x 70	Price on Request
6101 0012	5 °C to 60 ° C	324 / 12	60 x 60 x 90	Price on Request
6101 0016	5 °C to 60 ° C	440 / 16	70 x 70 x 90	Price on Request
6101 0035	5 °C to 60 ° C	1000 / 35	95 x 100 x 105	Price on Request

### B.O.D. Incubator - GMP Model, Rivotek

Cat No.	Temp. Range	Volume Ltrs. / Cu. Ft.	Chamber Size W x D x H in cms	Maximum Price Rs/Pc
6102 0004	5 °C to 60 ° C	120 / 04	45 x 45 x 60	Price on Request
6102 0008	5 °C to 60 ° C	200 / 08	50 x 50 x 70	Price on Request
6102 0012	5 °C to 60 ° C	324 / 12	60 x 60 x 90	Price on Request
6102 0016	5 °C to 60 ° C	440 / 16	70 x 70 x 90	Price on Request
6102 0035	5 °C to 60 ° C	1000 / 35	95 x 100 x 105	Price on Request

### Autoclave - STD Model, Rivotek

Cat No.	Temp. Range	Size of Working Chamber in inches	Volume Ltrs.	Maximum Price Rs/Pc
6300 0035	Factory set for 121 °C	12 dia x 20 ht	35	Price on Request
6300 0052	Factory set for 121 °C	14 dia x 22 ht	52	Price on Request
6300 0095	Factory set for 121 °C	18 dia x 24 ht	95	Price on Request
6300 0175	Factory set for 121 °C	22 dia x 30 ht	175	Price on Request

### Autoclave - Fully Automatic, Rivotek

Cat No.	Temp. Range	Size of Working Chamber in inches	Volume Ltrs.	Maximum Price Rs/Pc
6301 0035	Factory set for 121 °C	12 dia x 20 ht	35	Price on Request
6301 0052	Factory set for 121 °C	14 dia x 22 ht	52	Price on Request
6301 0095	Factory set for 121 °C	18 dia x 24 ht	95	Price on Request
6301 0175	Factory set for 121 °C	22 dia x 30 ht	175	Price on Request



### Autoclave - Fully Automatic GMP, Rivotek

Cat No.	Temp. Range	Size of Working Chamber in inches	Volume Ltrs.	Maximum Price Rs/Pc
6302 0035	Factory set for 121 °C	12 dia x 20 ht	35	Price on Request
6302 0052	Factory set for 121 °C	14 dia x 22 ht	52	Price on Request
6302 0095	Factory set for 121 °C	18 dia x 24 ht	95	Price on Request
6302 0175	Factory set for 121 °C	22 dia x 30 ht	175	Price on Request

**Imp Note:**

1. Calibration certificate with IQ, OQ, and PQ Protocols will be provided only for GMP Models
2. On site validation service for GMP Models is available (P.O.R)  
(Kindly make a note of this and do the needful before placing the order)

### OPTIONAL ACCESSORIES FOR RIVOTEK INSTRUMENTS

#### Laboratory Oven, Rivotek

Cat No.	Description	Maximum Price Rs/Pc
6402 0501	Digital Timer of 999 minutes with auto heater cut-off	Price on Request
6402 0502	Microprocessor based PID Controller in lieu of above digital temperature controller	Price on Request
6402 0503	Microprocessor based PID Controller with printer interface to connect to EPSON Dot Matrix Printer. Date, Time and Temperature can be printed whereas Print interval can be set between 1 to 999 minutes. (Supplied without printer)	Price on Request
6402 0504	Safety Controller with alarm in case of overshoot of temp.	Price on Request

#### Vacuum Oven, Rivotek

Cat No.	Description	Maximum Price Rs/Pc
6602 0501	Microprocessor based PID Controller in lieu of above digital temperature controller	Price on Request
6602 0502	Microprocessor based PID Controller with printer interface to connect to EPSON Dot Matrix Printer. Date, Time and Temperature can be printed whereas Print interval can be set between 1 to 999 minutes. (Supplied without printer)	Price on Request
6602 0503	Safety Controller with alarm in case of overshoot of temp.	Price on Request
6701 0501	Oil Sealed High Vacuum Pump	Price on Request

#### Muffle Furnace, Rivotek

Cat No.	Description	Maximum Price Rs/Pc
6902 0501	Microprocessor based PID Controller in lieu of above digital temperature controller	Price on Request
6902 0502	Microprocessor based PID Controller with printer interface to connect to EPSON Dot Matrix Printer. Date, Time and Temperature can be printed whereas Print interval can be set between 1 to 999 minutes. (Supplied without printer)	Price on Request
6902 0503	Safety Controller with alarm in case of overshoot of temp.	Price on Request



**Bacteriological Incubator, Rivotek**

Cat No.	Description	Maximum Price Rs/Pc
6502 0501	Digital Timer of 999 minutes with auto heater cut-off	Price on Request
6502 0502	Microprocessor based PID Controller in lieu of above digital temperature controller	Price on Request
6502 0503	Microprocessor based PID Controller with printer interface to connect to EPSON Dot Matrix Printer. Date, Time and Temperature can be printed whereas Print interval can be set between 1 to 999 minutes. (Supplied without printer)	Price on Request
6502 0504	Safety Controller with alarm in case of overshoot of temp.	Price on Request

**B. O. D Incubator, Rivotek**

Cat No.	Description	Maximum Price Rs/Pc
6102 0501	Microprocessor based PID Controller with printer interface to connect to EPSON Dot Matrix Printer. Date, Time and Temperature can be printed whereas Print interval can be set between 1 to 999 minutes. (Supplied without printer)	Price on Request
6102 0502	Microprocessor based PID Controller in lieu of above digital temperature controller	Price on Request
6102 0504	Additional SS Trays for 4,8 & 12 cubic.ft Models	Price on Request
6102 0505	Additional SS Trays for 16,29,35 cubic.ft Models	Price on Request
6102 0506	Additional high temp safety to cut-off all heaters with audio-visual alarm ensuring temp within the chamber doesn't exceed + 70 °C	Price on Request

**Autoclave Steam Sterilizer, Rivotek**

Cat No.	Description	Maximum Price Rs/Pc
6300 0502	Digital Temperature controller with 4 sensors (3 temp+ 1 pressure) with printer interface for dot matrix printer (supplied without printer)	Price on Request
6300 0501	Perforated Basket SS ( <b>Mandatory</b> )	Price on Request

**Warranty Clause for Rivotek, Instruments:**

The above equipment is warranted with following conditions:

- The warranty is valid for twelve months from the date of invoice of the equipment.
- The scope of this warranty is limited to the general performance of the equipment and components used. Vacuumatic and consumable items like fuse, heater, battery, lamp etc. are not covered under warranty.
- Complaints arising out of mishandling willful or through ignorance, negligence or resulting from accidents, attempted repairs, and inadequate power supply, fluctuation in voltage, general wear and tear are not covered under this warranty.
- Complaints should be communicated to the warrantor in writing.
- All genuine complaints arising from manufacturing defects will be attended to free of cost during the warranty period.



## TERMS & CONDITIONS

The following terms and conditions of sale and payment shall apply to all goods supplied by us unless specifically accepted by us in writing. Acceptance of goods supplied constitutes acceptance of these terms :

- Prices are in Indian Rupees and are maximum recommended prices. The Authorised Dealers are at liberty to charge lower than that stipulated here. These prices are exclusive of any delivery charges, octroi and other non-statutory levies.
- Prices are **exclusive of VAT / Local Sales Tax which shall be extra as applicable.**
- Prices are subject to change without notice. Prices applicable on the date of supply shall be valid.
- Unless agreed otherwise, invoices are to be paid immediately without deduction of any discount.
- The price contains the standard quantities per pack for each item. It is desirable that orders are placed in multiples thereof.
- Every effort shall be made to maintain quoted delivery dates. However, due to the risks and nature of working with the glass, these dates are not in any way binding. Our contractual obligation to our customers is subject to correct and prompt deliveries from our suppliers.
- No goods should be returned to us without our prior approval.
- All information contained in this pricelist-cum-catalogue cannot be reproduced without our written consent.
- Generally, our policy is to service our customers through our nationwide **Authorised Dealers** only.
- All legal relationship formed as a result of sales would be in accordance with the Indian Laws and **Mumbai** shall be the place of jurisdiction for all parties and for all matters. If **RIVIERA** appears as a plaintiff, it will also be entitled to start legal proceedings at any such city / town where the customers are located.

### **Additional Terms applicable to supply of Instruments only**

- Warranty** : The instruments supplied shall carry warrantee of one year from the date of invoice to the original purchaser against faulty workmanship and defect. Any part going defective will be replaced/ repaired free of cost. Vacuumatic items like fuses, lamps, bulbs, heaters, etc. are not covered under warrantee. Again damage resulting due to accident/misuse is not covered under warrantee. Warrantee conditions for different instruments may vary.
- Installation** : All the instruments covered in this price list can be installed by the user with the help of instruction manual supplied with the equipment. In case Company's technical representative has to undertake the installation, charges will be extra and shall be quoted on case-to-case basis.
- Delivery** : Will be effected Ex-Mumbai within 4-6 weeks from the date of receipt of the order complete in all respect. Exact delivery period will be intimated in the order acknowledgement. For specially manufactured items, delivery period will be more than 6 weeks.
- General** : Statutory levies if become applicable in future will be charged extra.





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**RIVIERA  
GLASS  
PVT LTD**



***Regd. & Head Office***

2116, Oberoi Garden Estates,  
Chandivli Studio Road,  
Chandivli, Andheri (East),  
Mumbai 400 072.

Phone : 022 - 28475228, 28473297, 2847 0265

Telefax : +91-22-28474108

e-mail: [riviera@vsnl.com](mailto:riviera@vsnl.com), [rivieraglass@sify.com](mailto:rivieraglass@sify.com)

Website: [www.rivieraglass.co.in](http://www.rivieraglass.co.in)

***Northern Regional Office***

236 / 237, Vardhaman Diamond Plaza,  
Desh Bandu Gupta Road, Opp. Paharganj  
Police Station, New Delhi 110 055.

Phone : 011 - 23535474, 011 - 32955474

Telefax : 011 - 23523568

e-mail: [rivieraglass@vsnl.net](mailto:rivieraglass@vsnl.net), [rivieradelhi@gmail.com](mailto:rivieradelhi@gmail.com)

***Southern Regional Office :***

TS-73, Thiru-Vi-Ka Industrial Estate,  
Ekkaduthangal, Chennai 600 032.

Telefax : 044-65656506

e-mail: [rivierachennai@vsnl.net](mailto:rivierachennai@vsnl.net),  
[rivierachennai@gmail.com](mailto:rivierachennai@gmail.com)

***Eastern Regional Office***

Shanti Niketan, 1st Floor,  
10, Iswar Chowdhury Road,  
Kolkata 700 029.

Phone : 033 - 24632687

Telefax : +91-33-24666462

e-mail: [rivieraglass\\_kolkata1@yahoo.com](mailto:rivieraglass_kolkata1@yahoo.com)

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Ltd.

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C-2116, Oberoi Garden Estates,  
Chandivli Studio Road, Chandivli,  
Andheri (E), Mumbai - 400 072, India.

Phone : 28475228, 28473297

Telefax : +91-22-28474108

E-mail : [riviera@vsnl.com](mailto:riviera@vsnl.com).

Website : [www.rivieraglass.co.in](http://www.rivieraglass.co.in)

