

# Laboratory Glassware





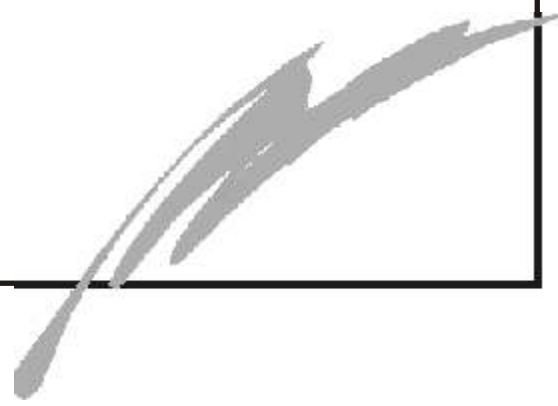
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Catalogue - cum - Price List  
w. e. f. 01-04-2022  
GST Extra as applicable



## 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. Its 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 SiO <sub>2</sub>	4% by weight Na <sub>2</sub> O/K <sub>2</sub> O
13% by weight B <sub>2</sub> O <sub>3</sub>	2% by weight Al <sub>2</sub> O <sub>3</sub>

### 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.

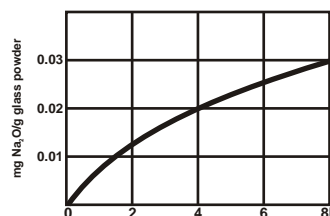
Only hydrofluoric acid, solutions containing fluoride ions (e.g. ammonium fluoride), very hot phosphoric acid and alkaline solutions attack the surface of the glass, the degree of attack increasing as the concentration and temperature rise.

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

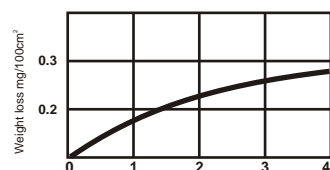
DURAN is specified as hydrolytic resistance class ISO 719-HGB 1 because in glass powder tests to DIN 12111, ISO 719, only 0.026 ml HCl ( 0.01 mol/l) is dissipated from 1 g of glass powder after being held in water at 98°C for one hour. This corresponds to an alkali weight loss of 0.008 mg Na<sub>2</sub>O 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.

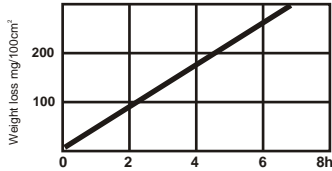


Acid attack on DURAN as a function of time to DIN 12 116

### 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

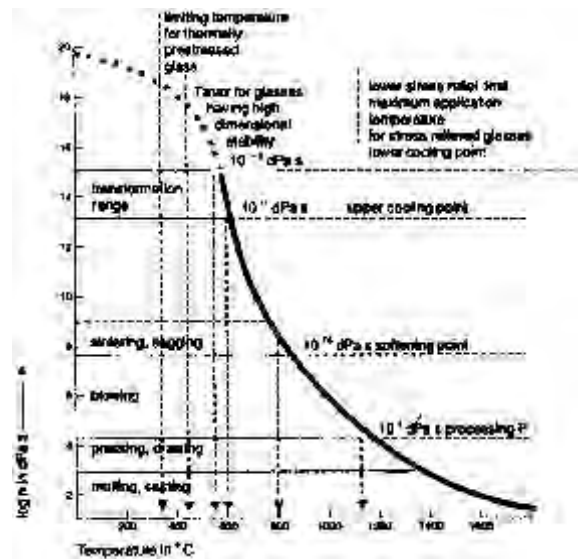
For the processing of DURAN by glassblowers

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  $10^1$  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 in 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.

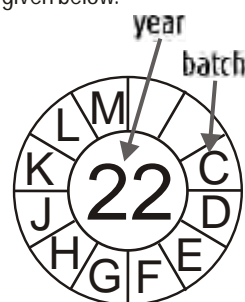
CLASS "B" - Volumetric Glassware of Class "B" are not suitable for certification. They have larger tolerances than Classes "A" & "AS".

#### 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 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/Hexaflour-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, trated or strong	++	++	+	++	++	-	++	+	++	-
Acids, oxidising (oxidising agents)	-	+	-	++	+	-	-	+	+	-

++ = very good resistance

+ = good to limited resistance

- = low resistance



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 9001:2015**

Certificate Registr. No. **01 100 060671**

Certificate Holder: **DWK Life Sciences GmbH**  
Otto-Schott-Str. 21  
97877 Wertheim  
Germany

including the branch offices according to annex

Scope: Sales and production of products from borosilicate glass 3.3 and other glass types for the segments laboratory, consumer and industry including sales of catalog items

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2021-06-12 until 2024-06-11.  
First certification 2006

2021-06-17



TÜV Rheinland Cert GmbH  
Am Grauen Stein · 51105 Köln



**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	22	30	10	84.00
70100 10	10	26	35	10	85.00
70100 14	25	34	50	10	97.00
70100 17	50	42	60	10	83.00
70100 24	100	50	70	10	83.00
70100 29	150	60	80	10	83.00
70100 36	250	70	95	12	93.00
70100 41	400	80	110	12	151.00
70100 44	500	83	115	6	145.00
70100 48	600	90	125	6	153.00
70100 54	1000	105	145	6	300.00
70100 63	2000	130	185	4	606.00
70100 68	3000	150	210	1	1542.00
70100 73	5000	170	270	1	2267.00
70100 86	10000	220	350	1	7307.00

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

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



Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21106 14	25	34	50	10	222.00
21106 17	50	42	60	10	197.00
21106 24	100	50	70	10	142.00
21106 29	150	60	80	10	171.00
21106 36	250	70	95	10	124.00
21106 41	400	80	110	10	213.00
21106 48	500/600	90	125	10	197.00
21106 54	1000	105	145	10	402.00
21106 63	2000	132	185	10	719.00
21106 68	3000	152	210	4	2068.00
21106 73	5000	170	270	1	3038.00
21106 86	10000	217	350	1	9787.00

\*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	148.00
70110 24	100	48	80	24	154.00
70110 29	150	54	95	12	160.00
70110 36	250	60	120	12	154.00
70110 44	500	80	140	6	212.00
70110 54	1000	95	180	6	417.00
70110 63	2000	120	240	1	728.00



Beakers, Tall Form, with Graduation and Spout, DURAN					DIN 12331, ISO 3819, USP Standard	
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
21116 17	50	38	70	10	242.00	
21116 24	100	48	80	10	243.00	
21116 29	150	54	95	10	245.00	
21116 36	250	60	120	10	222.00	
21116 41	400	70	130	10	270.00	
21116 48	500/600	80	150	10	359.00	
21116 54	1000	95	180	10	791.00	
21116 63	2000	120	240	10	1205.00	
21116 68	3000	135	280	2	1759.00	



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	148.00
70120 44	500	80	140	6	212.00
70120 54	1000	95	180	6	412.00



Beakers, Tall Form, with Graduation without Spout, DURAN					USP Standard	
Cat No.	Capacity ml	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
21117 17	50	38	70	10	240.00	
21117 24	100	48	80	10	245.00	
21117 29	150	54	95	10	245.00	
21117 36	250	60	120	10	222.00	
21117 41	400	70	130	10	270.00	
21117 48	500/600	80	150	10	358.00	
21117 54	1000	95	180	10	790.00	



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	68	110	10	414.00
70130 44	500	88	145	10	526.00



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	860.00
21141 36	250	68	52	105	10	738.00
21141 44	500	86	59	142	10	926.00



**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	3110.00
24703 63	2000	136	267	1	.3601.00
24703 73	5000	183	340	1	12825.00
24703 86	10000	230	415	1	18305.00
24703 91	20000	295	510	1	30063.00

**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	619.00

**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	370.00
70200 25	125	10	364.00
70200 36	250	10	394.00
70200 44	500	10	418.00
70200 54	1000	8	654.00
70200 63	2000	8	1082.00
70200 65	2500	1	1133.00
70200 73	5000	1	7085.00

**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	541.00
70210 25	125	10	569.00
70210 36	250	10	679.00
70210 44	500	10	802.00
70210 54	1000	8	1030.00
70210 63	2000	1	1820.00


**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	14/15	10	641.00
211612 24	100	19/26	10	650.00
211612 36	250	19/26	10	688.00
211613 44	500	24/29	10	794.00
211614 54	1000	29/32	10	1128.00
211615 63	2000	34/35	10	1923.00


**Bottles Reagent, with I/C Joint and Glass Stopper, AMBER (Amber processing done in India), Made from DURAN**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
211661 17	50	14/15	10	1086.00
211662 24	100	19/26	10	1221.00
211662 36	250	19/26	10	1289.00
211663 44	500	24/29	10	1561.00
211664 54	1000	29/32	10	2127.00
211665 63	2000	34/35	10	3528.00


**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	428.00
21161 24	100	54	95	10	508.00
21161 36	250	73	131	10	521.00
21161 44	500	89	162	10	541.00
21161 54	1000	111	200	10	905.00
21161 63	2000	138	246	10	1561.00
21161 73	5000	186	318	1	12107.00
21161 86	10000	234	398	1	16580.00
21161 91	20000	300	492	1	31970.00


**Bottles, Solution, Tooled Neck, AMBER (Amber processing done in India), 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	779.00
21166 24	100	54	95	10	916.00
21166 36	250	73	131	10	987.00
21166 44	500	89	162	10	1175.00
21166 54	1000	111	200	10	1653.00
21166 63	2000	138	246	10	2773.00


**Bottles, Relative Density, Accuracy as per IS 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	29 x 48	10/15	10	483.00
70910 25	25	2	40 x 55	10/15	10	528.00
70910 50	50	3	50 x 65	10/15	2	565.00





**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	311.00
70900 15	15	25 x 65	10	329.00
70900 25	25	30 x 65	10	403.00
70900 60	60	40 x 90	4	600.00



**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	673.00
70900 40	40	60 x 40	10	949.00



**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	713.00
74210 44	500	24/29	10	942.00
74210 54	1000	29/32	10	1176.00



**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	518.00
74211 44	500	24/29	10	558.00
74211 54	1000	29/32	10	581.00



**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	1159.00
74212 36	250	29/32	10	1244.00
74212 44	500	29/32	10	1492.00



**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	645.00
74213 36	250	29/32	10	676.00
74213 44	500	29/32	10	767.00





**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 165	10	1047.00
74214 36	250	60 x 190	10	1157.00
74214 44	500	70 x 245	10	1419.00

**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 nm
- 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.

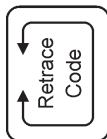
**LABORATORY BOTTLES WITH PLASTIC COATING, DURAN**

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 4796-1, USP Standard**

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	606.00
21801 145	25	25	36	74	10	375.00
21801 175	50	32	46	91	10	430.00
21801 245	100	45	56	105	10	440.00
21801 295	150	45	62	115	10	520.00
21801 365	250	45	70	143	10	455.00
21801 445	500	45	86	181	10	499.00
21801 515	750	45	95	208	10	663.00
21801 545	1000	45	101	230	10	788.00
21801 635	2000	45	136	265	10	1366.00
21801 695	3500	45	160	300	1	6982.00
21801 735	5000	45	182	335	1	7696.00
21801 865	10000	45	227	415	1	15200.00
21801 885	15000	45	268	450	1	26969.00
21801 915	20000	45	288	510	1	30500.00
21801 925	25000	45			1	62946.00

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

# DURAN® GL 45 BOTTLE CARRYING SYSTEM



The new modular Bottle Carrying System fits standard laboratory bottles that have a GL 45 neck finish and is compatible with four bottle sizes 2, 5, 10 and 20 litres. It is ergonomically designed, and offers health & safety benefits to the user and allows easy and safe transport of bottles around the laboratory or production facility. It makes pouring liquids from the larger bottles more comfortable and safer. All materials are fully autoclavable.

### Carrying Handle

- Carrying handle is suitable for bare or gloved hands
- Handle strap is flexible enough to allow pouring

### Tightening Strap

- With indicator arrow
- End modified to prevent unthreading

### Pouring Handle

- Ergonomically shaped
- Anti-slip grip



### GL 45 Bottle Collar

- The collar is securely attached by pushing down over the GL 45 thread with 4 teeth that lock under transfer ring.
- The collar is only removable by cutting – so attachment is 100% secure in use.
- A cut line indicator for removal of collar when required.

### Horizontal Straps

- Durable stitched construction
- Made from "anti-slip" material

4 sizes available  
2 L / 5 L / 10 L / 20 L



### Fast and secure tightening

of the polypropylene straps with two side strap adjusters for the larger 5, 10 and 20 litre bottles



### Safe and controlled pouring using handle

- Safer pouring of liquids using a second lower "Pouring Handle" located on the side strap
- Available on the 5 litre carriers only



### Easy and safe carrying using handle

- Handles attaches at the neck and fully supports the base



**Lot Specific Retrace Code**  
for traceability and certification

## Bottle Carrying System suitable for GL 45, DURAN

Cat No.	Suitable for Capacity Litres	Qty Per Pack Pcs	Maximum price Rs./Pc.
29280 6304	2	1	5141.00
29280 7309	5	1	21190.00
29280 8605	10	1	22140.00
29280 9104	20	1	30023.00

# DURAN Group ... now ... DWK Life Sciences



## Company profile

In June 2017 the companies DURAN Group, Wheaton Industries and Kimble Chase merged to form a new global company – DWK Life Sciences.

DWK Life Sciences combines the expertise of the acclaimed product brands DURAN®, WHEATON® and KIMBLE®. As one of the world's leading manufacturers of premium lab glass, DWK Life Sciences offers its customers a complete range of high-quality laboratory glassware – from the classic disposables to reusable precision glassware. Additionally, DWK Life Sciences develops and produces a wide range of plastic labware and specialty products for life science applications as well as packaging and storage solutions for the pharmaceutical industry.

The DWK Life Sciences product portfolio comprises over 30,000 products manufactured at 11 sites in Europe, North America and Asia. Globally, more than 1,700 employees work on the development and production of innovative products and services to meet the high expectations of customers in laboratories around the world – inspired by the company slogan “Excellence in your hands”.

Find out more: [www.DWK-LifeSciences.com](http://www.DWK-LifeSciences.com)

## Introduction

Former company logos



New company name

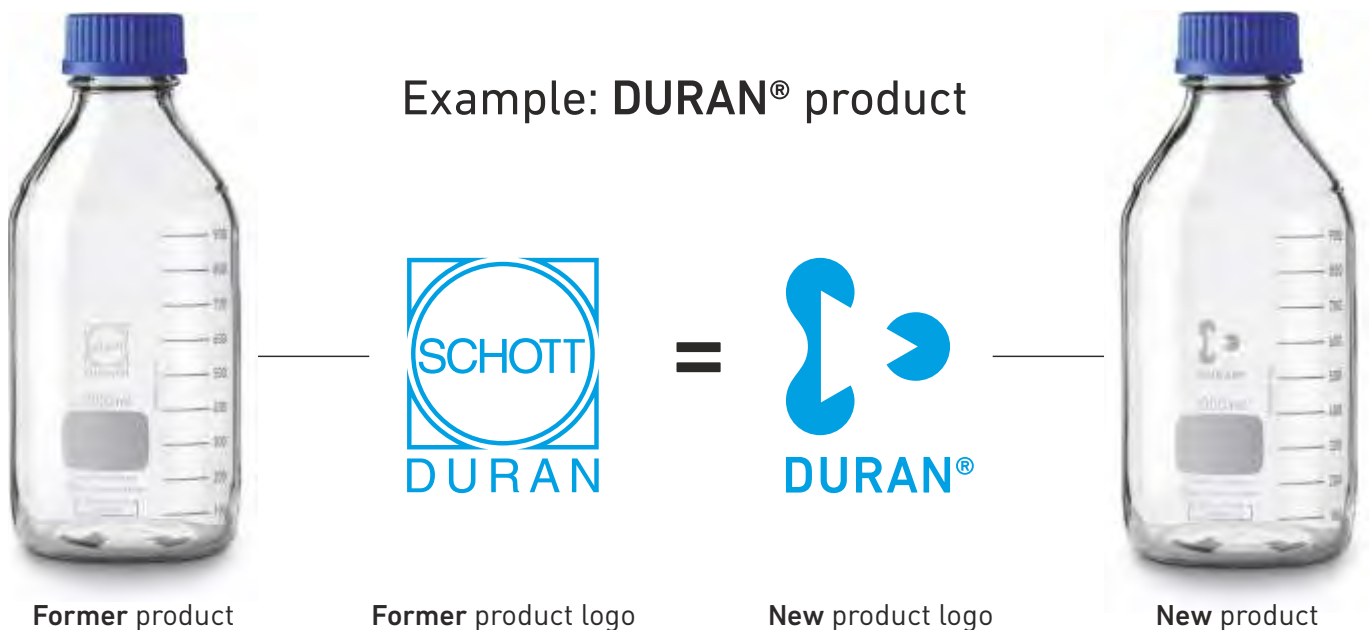
**DWK Life Sciences**

New company logo



## Product Logo

In course of the merger, the current product logos on products and packaging will be replaced by newly designed product logos – **the product quality remains unchanged.**





**Bottles, Laboratory, with DIN thread, Graduated, AMBER, ISO 4796-1, USP Standard**  
**(Amber processing done in India), with PP Screw Cap and PP Pouring Ring (Blue),**  
**Autoclavable upto 140°C, Made from DURAN (Retrace Code Based Batch Certificate**  
**shall be provided as per respective sizes of Plain Bottles having Cat Nos 21801.. series)**



Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21809 085	10	25	36	50	10	745.00
21809 145	25	25	36	74	10	600.00
21809 175	50	32	46	91	10	685.00
21809 245	100	45	56	105	10	757.00
21809 295	150	45	62	115	10	826.00
21809 365	250	45	70	143	10	798.00
21809 445	500	45	86	181	10	953.00
21809 515	750	45	95	208	10	1191.00
21809 545	1000	45	101	230	10	1242.00
21809 635	2000	45	136	265	10	2333.00
21809 695	3500	45	160	300	1	12451.00

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

**Bottles, Laboratory, with DIN thread, Graduated, ISO 4796-1, USP Standard**  
**without Cap and Pouring Ring, 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	532.00
21801 14	25	25	36	70	10	301.00
21801 17	50	32	46	87	10	338.00
21801 24	100	45	56	100	10	348.00
21801 29	150	45	62	110	10	428.00
21801 36	250	45	70	138	10	363.00
21801 44	500	45	86	176	10	407.00
21801 51	750	45	95	203	10	571.00
21801 54	1000	45	101	225	10	696.00
21801 63	2000	45	136	260	10	1274.00
21801 69	3500	45	160	295	1	6890.00
21801 73	5000	45	182	330	1	7604.00
21801 86	10000	45	227	410	1	15110.00
21801 88	15000	45	268	445	1	26877.00
21801 91	20000	45	288	505	1	30410.00
21801 92	25000	45			1	On Request



**Bottles, Laboratory, with DIN thread, Graduated, AMBER** **ISO 4796-1, USP Standard**  
**(Amber processing done in Germany),** without PP Screw Cap and PP Pouring Ring,  
 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
21806 08	10	25	36	50	10	1089.00
21806 14	25	25	36	74	10	823.00
21806 17	50	32	46	91	10	949.00
21806 24	100	45	56	105	10	978.00
21806 29	150	45	62	115	10	1251.00
21806 36	250	45	70	143	10	1161.00
21806 44	500	45	86	181	10	1426.00
21806 51	750	45	95	208	10	2107.00
21806 54	1000	45	101	230	10	1939.00
21806 63	2000	45	136	265	10	3163.00
21806 69	3500	45	160	300	1	14497.00
21806 73	5000	45	182	335	1	19636.00
21806 86	10000	45	227	415	1	35401.00
21806 88	15000	45	268	450	1	42465.00
21806 91	20000	45	288	510	1	84817.00
21806 92	25000	45			1	On Request



**Bottles, Laboratory, with DIN thread, Graduated, AMBER** **ISO 4796-1, USP Standard**  
**(Amber processing done in India),** without PP Screw Cap and PP Pouring Ring,  
 Autoclavable upto 140°C, Made from DURAN (Retrace Code Based Batch Certificate shall be provided as per respective sizes of Plain Bottles having Cat Nos 21801.. series)

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21809 08	10	25	36	50	10	715.00
21809 14	25	25	36	74	10	511.00
21809 17	50	32	46	91	10	581.00
21809 24	100	45	56	105	10	616.00
21809 29	150	45	62	115	10	747.00
21809 36	250	45	70	143	10	664.00
21809 44	500	45	86	181	10	770.00
21809 51	750	45	95	208	10	1024.00
21809 54	1000	45	101	230	10	1138.00
21809 63	2000	45	136	265	10	1973.00
21809 69	3500	45	160	300	1	11884.00



**Bottles, Laboratory, Round, Wide Mouth, Plain, with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, DURAN** **USP Standard**

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	953.00
11126 275	500	80	101	152	10	1013.00
11127 135	1000	80	101	222	10	1209.00
11127 155	2000	80	136	252	10	2583.00
21860 695	3500	80	160	275	1	8943.00
11139 495	5000	80	182	314	1	11686.00
11139 505	10000	80	227	389	1	21251.00
11139 515	20000	80	288	484	1	45840.00
12002 655	30000	80	340	548	1	89510.00
12001 545	50000	80	400	590	1	161851.00



**Bottles, Laboratory, Round, Wide Mouth, AMBER (Amber processing done in India), with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, Made from DURAN** **USP Standard**  
(Retrace Code Based Batch Certificate shall be provided as per respective sizes of Plain Bottles)

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11627 365	250	80	95	105	10	1653.00
11627 275	500	80	101	148	10	1767.00
11627 135	1000	80	101	218	10	1894.00
11627 155	2000	80	136	248	10	3923.00
11627 695	3500	80	160	275	1	14533.00



**Bottles, Laboratory, with DIN thread, Graduated, CLEAR, with Tamper Evident PP Screw Cap, Autoclavable upto 140°C, DURAN** **ISO 4796-1, USP Standard**

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	524.00
21802 445	500	45	86	181	10	568.00
21802 545	1000	45	101	230	10	857.00
21802 635	2000	45	136	267	10	1435.00
21802 735	5000	45	183	340	1	7765.00





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

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	1389.00
10926 775	50	32	46	87	10	1463.00
21805 245	100	45	56	105	10	1642.00
21805 295	150	45	62	115	10	1694.00
21805 365	250	45	70	143	10	1895.00
21805 445	500	45	86	181	10	1934.00
21805 515	750	45	95	208	10	2603.00
21805 545	1000	45	101	230	10	2730.00
21805 635	2000	45	136	267	10	4379.00
21805 695	3500	45	160	300	1	14538.00
21805 735	5000	45	182	330	1	18767.00



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

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21865 365	250	80	95	105	10	2876.00
11601 525	500	80	101	148	10	2749.00
11601 635	1000	80	101	218	10	3412.00
11601 645	2000	80	136	248	10	5510.00
21865 695	3500	80	160	271	1	16832.00
11601 655	5000	80	182	311	1	22698.00



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

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 EN 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
21810 24	100	45	56	100	10	756.00
10922 34	250	45	70	138	10	891.00
10922 35	500	45	86	176	10	1163.00
21810 54	1000	45	101	225	10	1261.00



**Bottles, Laboratory, with DIN thread, Graduated, Pressure Resistant, AMBER, ISO 1595, USP Standard (Amber processing done in Germany), without Screw Cap and Pouring Ring, Autoclavable upto 140°C, DURAN PRESSURE PLUS**

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21816 24	100	45	56	100	10	2395.00
10943 67	250	45	70	138	10	3326.00
10943 68	500	45	86	176	10	4111.00
21816 54	1000	45	101	225	10	4960.00



**Premium Bottles, Laboratory, with DIN thread, Graduated, with Screw Cap and Pouring Ring (PFA), Thermal Shock Resistant, Autoclavable upto +200 °C, DURAN** **ISO 4796-1, USP Standard**

Premium Bottles contribute to safety in the laboratory while simplifying handling. Important features are

- With enhanced temperature-resistant screw cap manufactured from PFA including a matching pouring ring — can be used from -196 °C to +200 °C. Raw material conforms to USP Class VI — also PTFE coated silicone seal.
- Dye-free cap and pouring ring to prevent marking or contamination of ovens, drying chambers and sterilization cabinets.
- Entire system comprising bottle, cap and pouring ring conforms to USP/FDA.
- 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	2323.00
11270 76	250	45	70	138	10	2421.00
11270 77	500	45	86	176	10	2619.00
11270 78	1000	45	101	225	10	3114.00

**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** **USP Standard**

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	659.00
21820 365	250	45	64	143	10	703.00
21820 445	500	45	78	181	10	784.00
21820 545	1000	45	94	222	10	1182.00



**Bottles, Laboratory, Square, with DIN thread, Graduated, AMBER (Amber processing done in India), with PP Screw Cap and PP Pouring Ring (Blue), Autoclavable upto 140°C, Made from DURAN** **USP Standard**  
(Retrace Code Based Batch Certificate shall be provided as per respective sizes of Plain Bottles)

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	1027.00
21826 365	250	45	64	143	10	1108.00
21826 445	500	45	78	181	10	1258.00
21826 545	1000	45	94	222	10	1695.00

**Bottles, Laboratory, Square, with DIN thread, Graduated, CLEAR, with Tamper Evident PP Screw Cap, Autoclavable upto 140°C, DURAN** **USP Standard**

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	864.00
21821 445	500	45	78	181	10	945.00
21821 545	1000	45	94	222	10	1343.00



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

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	567.00
21820 36	250	45	64	143	10	611.00
21820 44	500	45	78	181	10	692.00
21820 54	1000	45	94	222	10	1090.00




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

Cat 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	148.00
29239 19	32	40	24	Blue	10	148.00
29239 28	45	54	25	Blue	10	148.00
29338 280	45	54	25	Yellow	10	196.00
29338 286	45	54	25	Green	10	196.00
29338 288	45	54	25	Grey	10	196.00
11127 16	80*	87	40	Blue	10	345.00

\* Quick Release Closure


**Quick release closure for DURAN GLS 80 laboratory bottle with PTFE coated seal, from PSU compound**

The material used is a special compound based on a polyarylsulphone. Consequently the chemical, thermal and mechanical properties of the material are noticeably improved and matched to laboratory requirements. Thanks to the thread, the DURAN GLS 80 bottle can be opened and closed with only a three-quarter turn. The seal, which is coated on both sides with PTFE, ensures the bottle can be tightly closed.



A matching PTFE pouring ring is available, permitting clean, drop-free use.

Cat No.	Thread GLS	Dia mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
<b>Cap</b>					
11658 88	80	86	40	5	3954.00
<b>Pouring Ring</b>					
11673 07	80		6.85	5	2226.00


**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	36.00
29242 28	45	4	Blue	10	36.00
10899 11	45	4	Green	10	61.00
10899 14	45	4	Grey	10	61.00
10899 17	45	4	Yellow	10	61.00
11601 66	80	4	Blue	10	277.00


**PBT Screw Cap (Red), with PTFE coated Silicone Liner, 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	719.00
29240 19	32	40	26	10	511.00
29240 28	45	54	28	10	719.00


**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	173.00
29244 28	45	4	10	173.00

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

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	273.00

**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 µm 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
29118 13	25	5	874.00
29118 19	32	5	916.00
29118 28	45	5	828.00
29118 91	80	2	1154.00

**PBT Screw Cap, for pH Sensor, DURAN**

Cat No.	DIN thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11713 95	45	54	28	1	2161.00



**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	256.00
29227 10	45	34	10	903.00



**DURAN PTFE COATED GL 45 SILICONE SEPTUM FOR PIERCING**

High purity PTFE coated silicone septum for use with DURAN GL 45 open topped screw cap and all sizes of DURAN GL 45 laboratory bottles. Can be used for the addition, inoculation or sampling using a syringe and needle. Ideal for chemistry, life science and biopharma laboratories.

**Applications:**

- Liquid transfer from HPLC solvent bottles
- Aseptic reagent delivery or culture sampling using a syringe and needle
- Reservoir cap for supplying laboratory instruments

**Features:**

- Soft silicone rubber for easy needle penetration and resealability
- Manufactured from high purity, Platinum catalysed silicone rubber and high quality PTFE film, reducing the risk of solvent contamination

- The silicone is faced with highly resistant PTFE to protect the silicone from chemical attack by the solvents
- The septum is suitable for use with all GL 45 sizes of the DURAN GL 45 bottles from 100 to 20,000 ml
- A liquid tight seal is provided when used in combination with the red PBT GL 45 open topped screw cap
- Wide temperature usage range from – 50 °C up to + 180 °C
- Autoclavable at 121 °C for 15 minutes
- Dry heat sterilizable at up to 180 °C



Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29248 30	DURAN PTFE coated GL 45 Silicone Septum for piercing (Platinum catalysed VMQ)	10	1036.00


**SILICONE SEAL PTFE coated VMQ, DURAN**

Cat No.	For Screw Caps Red GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29248 13	25	10	168.00
29248 19	32	10	235.00
29248 28	45	10	403.00


**DURAN GL 45 BROMOBUTYL RUBBER STOPPER**

DURAN bromobutyl rubber closure provide a gas tight seal for all GL 45 laboratory bottles. Bromobutyl rubber is essentially impermeable to most gases, and provides a controlled environment inside the glass bottle for oxygen sensitive materials. Useful for maintaining anaerobic culture conditions. Butyl rubber allows for multiple punctures providing easy access to the contents with a syringe.


**Applications:**

- Culture of anaerobic microorganisms (pressure resistant bottles recommended)
- Storage of anaerobic culture media (amber glass bottles recommended)
- Aerobic methane oxidation (MOx) research
- Storage of oxygen sensitive materials
- Applications requiring gas purging or sample transfer via a syringe

**Features:**

- Stopper shape, and material properties optimised to fit DURAN GL 45 bottles with sizes from 100 to 20,000 ml.
- Low permeability to air, gases and moisture.
- Manufactured from a high purity bromobutyl rubber elastomer.
- Conforms to EP 3.2.9 Type I closure for chemical and penetration tests.

- Material is virtually free of organics that might leach into the incubation medium.
- Elastic material for effective sealing and reliable self-sealing after needle piercing.
- A Upper surface features seven numbered hemispherical impressions for needle-piercing. Autoclavable at 121 °C for 15 minutes
- Wide usable temperature range: -50 to +121 °C.
- Suitable for autoclaving / steam sterilising at 121 °C for 20 minutes.
- Use with the DURAN GL 45 open topped / aperture screw cap for extra security (Standard DURAN original GL 45 lab bottles are not pressure resistant. If build up in pressure is anticipated, it is recommended to use the stopper without the GL 45 red open top cap. The use of pressure resistant bottles such as DURAN pressure plus should be considered)

Cat No.	Description	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29206 28	DURAN Rubber Stopper for GL 45 Laboratory bottles, straight plug, Grey Bromobutyl	10	443.00


**Premium Cap for Laboratory Bottles, DURAN**
**USP Standard**

Made of PFA with PTFE coated silicone seal and pouring ring of PFA Compound formulated without colour dye to avoid risk of leaching. Very high chemical resistance. High leak tightness through use of PTFE coated silicone seal.

**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 +200 °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	847.00
10886 79	Cap	45	Colourless	51	26	5	1581.00
10886 78	Pouring Ring	45	Colourless	-	4	5	437.00

# YOUTILITY

## TOUCH THE FUTURE



### THE DURAN® LABORATORY BOTTLE SYSTEM MORE THAN JUST A BETTER BOTTLE IT'S A COMPLETE SYSTEM



Duran Group pioneered the screw threaded GL 45 DURAN® borosilicate glass laboratory bottle way back in 1972. Since its introduction over four decades ago, the DURAN®GL 45 laboratory bottle has become the bottle of choice for laboratories around the world.

In response to the demands on laboratory efficiency Duran Group initiated a project to develop a laboratory bottle system that was more suited to today's customer requirements. The result is **DURAN YOUTILITY** Bottle System, a new generation of glass laboratory bottles for use in a wide and diverse range of scientific research applications. The innovation does not stop at the improved ergonomic bottle shape, but extends to dedicated accessories that incorporate many new innovative features to improve handling, sample identification and ease of use.

Each **YOUTILITY** bottle has many features that significantly improve the handling and utilization of bottles. The specially shaped gripping zones on both sides of the bottles permit easier and safer handling. With the new glass thread opening or closing

of the **YOUTILITY** bottle is significantly faster. The slimmer **YOUTILITY** bottle shape allows a more optimal use of limited space in autoclaves and laboratory refrigerators. The bottles can be conveniently stacked horizontally on their sides. Newly designed ceramic print layout on the bottle clearly indicates the nominal volume. The entire **YOUTILITY** bottle has an integrated Retrace Code to allow product traceability via a downloadable certificate of performance.

The new **YOUTILITY** bottle system helps to make laboratory work easier, safer and more economical. Smaller **YOUTILITY** pack sizes are ideal for users with a lower usage requirement for bottles. All sizes of **YOUTILITY** bottles are available in packs of four complete bottles.

**YOUTILITY** bottles come with a **SCREW CAP** having optimized ergonomic shape with faster opening and closing thread

Other **VERY USEFUL ACCESSORIES** available for **YOUTILITY** bottles are

**BOTTLE TAG** – Great for colour tagging your own bottles in shared work areas

**BOTTLE LABEL** – Stays on when you need it to, peels off when you don't

**DURAN YOUTILITY** Screw Cap features a secure grip, fast opening and quick closing. It has comfortable grooves and ridges for a more efficient and easier tightening or removal, especially with smaller sized or gloved hands. The inverted cone form and reduced cap diameter offers significant advantages, making handling easier and safer. The shortened thread inside the cap permits faster opening and closing, but is fully compatible with standard DIN GL 45 bottles. The tried and tested cap plug sealing system ensures a liquid tight seal. Besides, it has a predefined labeling area.

The **YOUTILITY** screw cap features an integrated two or three character Retrace Code to provide product traceability via a downloadable certificate. The cap is manufactured from a food grade polypropylene that is fully autoclavable and totally reusable.

#### SHOW YOUR TRUE COLOURS

Colourful GL 45 Bottle Tags offer an elegant solution to the marking of laboratory bottles. The Bottle Tags can be easily and securely attached around the neck of the **YOUTILITY** Bottle, even with the Screw Cap in place. The Bottle Tags feature a graspable tab that makes them easy to remove with bare or gloved hands. The silicone Bottle Tags are chemically robust, heat resistant, fully autoclavable and totally reusable. Their potential uses in the laboratory are endless; in a shared lab, tag all your bottles with your favourite colour. Or colour tag all the bottles used for a particular application or in a certain experiment. No more mix-ups. The GL 45 Bottle Tags are available in eight playful

**COLOURS :**  
**Red, Orange, Yellow, Green, Blue, Purple, Black and White**

## YOUTILITY BOTTLES LABELS

**YOUTILITY LABELS** were developed to address the need for a reliable, short term method of sample and bottle tracking and identification. The labels will stay on when you need them to do so, and are easy to remove when no longer required. This allows the bottles to be quickly and easily cleaned, ready for re-use.

The **YOUTILITY** label, is large rectangular label that fits all four sizes of bottle. The labeling of bottles helps to prevent sample mix-ups.

**YOUTILITY** label formats are manufactured from a tear resistant, matt white, polyester material coated with a high performance adhesive. The print receptive top surface will accept a variety of inks, including copier, printer, ball point and

technical markers. The labels are chemically resistant to typical laboratory chemicals such as disinfectants and many solvents. They have a wide -40 to + 150°C temperature performance range making them suitable for use in fridges, freezers, autoclaves, incubators and water baths without the risk of the labels drying out or falling off.

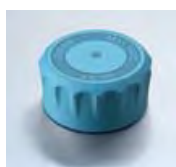
The **YOUTILITY** labels conveniently combine the flexibility of a blank written label with an autoclave/steam sterilization Class 1 process indicator (ANSI/AAMI/ISO 11140-1:2005). The labels are non-hazardous, and free of toxic heavy metals.

After use, the **YOUTILITY** labels may be easily and completely removed by peeling. The labels are supplied in a re-sealable, splash resistant box containing 100 labels.



Bottles, YOUTILITY, Clear Glass, with Screw Cap, Pouring Ring and Bottle Tag, Autoclavable upto 140°C, DURAN							USP Standard
Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
21881 285	125	45	55	124	4	482.00	
21881 365	250	45	66	158	4	499.00	
21881 445	500	45	78	193	4	548.00	
21881 545	1000	45	93	253	4	863.00	

Utility Bottles, AMBER Colour Processing done either in Germany or in India - Prices Available On Request



Screw Cap & Pouring Ring, PP, Cyan, suitable for YOUTILITY Bottles, DURAN					
Cat No.	Description	DIN Thread GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
29229 28	Cap	Food Grade	45	10	229.00
29241 28	Pouring Ring	—	45	16	87.00



Tags in Silicone for YOUTILITY Bottles, DURAN				
Cat No.	Colour	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
29243 29	Multi colour	16	212.00	
29243 2818	Red	20	212.00	
29243 2826	Orange	20	212.00	
29243 2834	Yellow	20	212.00	
29243 2842	Green	20	212.00	
29243 2859	Blue	20	212.00	
29243 2867	Purple	20	212.00	
29243 2875	Black	20	212.00	
29243 2883	White	20	212.00	



Self Adhesive Label (Bottles only), for YOUTILITY Bottles, DURAN			
Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pack	
29401 0203	100	3539.00	



## DURAN BAFFLED, WIDE MOUTH BOTTLE GLS 80

During mixing in standard GLS 80 laboratory bottles, the liquid moves in a swirling motion that approximates a solid-body rotation. The entire fluid, and any suspended particles, moves like a carousel. This is a very inefficient flow pattern, and very little mixing actually occurs. By adding three vertical baffles into the inner surface of the GLS 80 bottles, the swirling motion is disrupted, and a much more effective mixing occurs. The baffles improve the top-to-bottom circulation and produce a greater radial mixing. The baffles also offer other advantages such as suppressing the formation of a central vortex, and reducing dead-zones where mixing does not occur.



### Applications

- Aerating
- Dissolving
- Emulsifying
- Homogenizing
- Mixing
- Suspending

### Features

- The baffled GLS 80 bottles are fully compatible with both the DURAN GLS 80 magnetic stirrers, and other magnetic stir bars.
- The baffled GLS 80 bottles are fully autoclavable.
- The wide 65 mm inner diameter of the GLS 80 wide mouth provides easy access to the contents, or for cleaning.
- The baffles are moulded into the glass side wall of the bottles and form a continuous, smooth inner surface making clean up easy.
- Compatible with full range of wide mouth GLS 80 connection cap systems for liquid addition or removal when mixing with stir bars.
- The bottles feature an easy-to-read graduated volume scale.

### Bottles Baffled Wide Mouth, GLS 80, supplied complete with Polypropylene Pouring Ring and GLS 80 Cap, DURAN

Cat No.	Capacity ml	Height mm	Dia mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21286 365	250	105	95	1	2680.00
21286 445	500	152	101	1	2990.00
21286 545	1000	222	101	1	3553.00

### Additional Attachments (Optional)

Cat No.	Description	Benefits	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29118 91	DURAN GLS 80 blue polypropylene vented cap*	For use with magnetic stir bars. PTFE membrane vent allows gas exchange with the atmosphere, but protects from external contamination.	2	1154.00
21263 91	DURAN Stirred reactor wide mouth cap for 250 ml bottle, GLS 80 supplied with impeller shaped magnetic stirrer, 4 connection ports (2x GL 18 and 2x GL 14)*	For use with 250 ml GLS 80 bottles. Allows the efficient mixing of the contents using a magnetic stirrer. Liquid may be added or removed via the optional tube connectors.	1	76654.00
12003 79	DURAN Stirred reactor wide mouth cap for 500 or 1000 ml bottles, GLS 80 supplied with anchor shaped magnetic stirrer, 4 connection ports (2x GL 18 and 2x GL 14)*	For use with 500 or 1000 ml GLS 80 bottles. Allows the efficient mixing of the contents using magnetic stirrer. Liquid may be added or a removed via the optional tube connectors.	1	44845.00

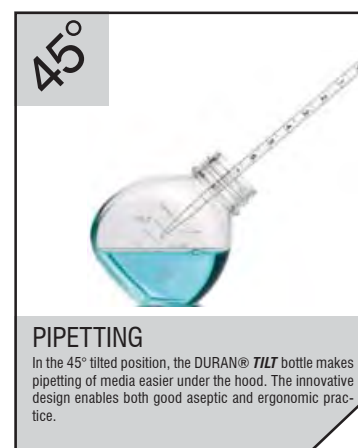
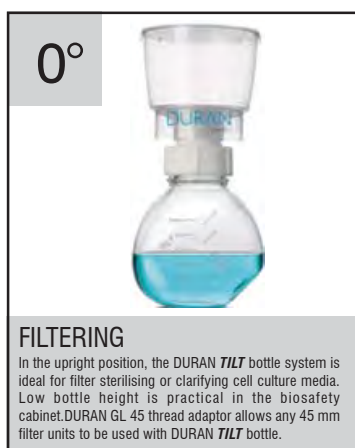
\* Note: DURAN baffled wide mouth bottles GLS 80 must be ordered separately.

## DURAN *TILT* TURNING USABILITY INTO SECURITY

Biosafety cabinets and clean hoods are essential for working with cell cultures under sterile conditions. Unfortunately, they make the handling of media bottles difficult and time-consuming for researchers. The DURAN *TILT* bottle changes everything. The *TILT* bottle has two positions: upright for filter sterilization or storage, and tilted at 45° for pipetting. Take a look at cell culture media from a new angle and discover a bottle system that eases handling and turns usability into security.



- Borosilicate 3.3 glass for reusability and lower whole life costs
- Space saving shape for fridge storage and water baths
- Low bottle height for easy handling in safety cabinets
- GL 56 mouth and screw cap - bigger opening for easy pipetting and safer handling
- 45° *TILT* position for pipetting without holding the bottle
- Tilted volume indicators for convenience
- Vacuum resistant bottle for safe filter sterilisation



DURAN  
Bottle top  
vacuum  
filtration  
unit



DURAN  
GL45  
Thread  
Adapter



DURAN  
*TILT*  
Protective  
Light  
Shield

### DURAN *TILT* – MEDIA BOTTLE

Cat. No.	Description	Glass thread	Height (incl. cap) mm	Qty per Pack Pcs.	Maximum Price Rs./Pc.
21891 4459	DURAN® <i>TILT</i> Bottle, clear glass Complete with white polypropylene screw cap 500 ml (supplied non-sterile)	GL 56	151	4	1884.00

### DURAN *TILT* – ACCESSORIES AND REPLACEMENT PARTS

Cat. No.	Description	Material Colour	Qty per Pack Pcs.	Maximum Price Rs./Pc.
29243 5601	DURAN <i>TILT</i> Light Shield includes four GL 56 Bottle Tags (Orange, Yellow, Blue, Purple)	Silicone / White and mixed colours	4	949.00
29243 5626	DURAN GL 56 Bottle Tag Orange	Silicone / Orange	20	258.00
29243 5634	DURAN GL 56 Bottle Tag Yellow	Silicone / Yellow	20	258.00
29243 5659	DURAN GL 56 Bottle Tag Blue	Silicone / Blue	20	258.00
29243 5667	DURAN GL 56 Bottle Tag Purple	Silicone / Purple	20	258.00
29119 5601	DURAN GL 45 thread adaptor for bottle top vacuum filtration unit (GL 45 external, GL 56 internal)	PTFE / White	1	4816.00
29401 5604	DURAN <i>TILT</i> GL 56 self-adhesive identification label for screw cap, 40 mm diameter	Polyester / White	1	2708.00
29229 5602	DURAN <i>TILT</i> GL 56 screw cap	Polypropylene / White	10	352.00

### DURAN BOTTLE TOP VACUUM FILTRATION UNITS

Cat. No.	Description	Membrane Pore Size $\mu$ mPES	Filter Dia mm	Thread mm	Qty per Pack Pcs.	Maximum Price Rs./Pc.
29270 2818	DURAN 500 ml Funnel Only Gamma sterilized	0.10	90	45	12	2739.00
29270 2826	DURAN 500 ml Funnel Only Gamma sterilized	0.20	90	45	12	2234.00
29270 2842	DURAN 500 ml Funnel Only Gamma sterilized	0.45	90	45	12	1732.00





# DURAN® PURE

## DEVELOPED FOR PHARMA

**DURAN® PURE** is a range of high-quality bottles and closures developed for the needs of the pharmaceutical industry. **DURAN® PURE** meets the requirements of the international pharmacopeias and is available with the certificates required by the regulatory authorities

### FEATURES

- **EP/USP Type I borosilicate glass**
- **Size range 25 ml - 20 l**
- **Protective cover** prevents contamination
- **Single batch delivery CoA** available
- **100% traceability**
- **100% visual inspection**
- **Change control**
- **Drug Master File**



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

### APPLICATION AREAS

- Manufacturing of pharmaceutical products
- Storage of bulk drug intermediates
- Transportation of APIs

Detailed view of dust cover





## DURAN® PURE Premium Screw Caps

DURAN® PURE Premium Screw Caps made from PFA (fluoropolymer) are chemically and thermally very resistant and compatible with autoclaving and other common sterilization methods. The products include silicone seals which are coated with highly inert PTFE.



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

### FEATURES

- Caps made from PFA with PTFE coated silicone seal
- Produced and packaged in ISO Class 7 clean rooms
- Single batch delivery CoA available
- 100% traceability
- Change control
- Drug Master File



DURAN® PURE Premium Lip Seal Cap GL 45  
Cat. No. 89886 2802

### Bottles, with DIN thread, Graduated, CLEAR, with Dust Cover without Cap, USP / FDA conformity (DMF No. 28042) DURAN PURE ISO 3585

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty Per Pallet Pcs.	Maximum Price Rs/Pc
81801 1401	25	25	36	74	940	On Request
81801 2406	100	45	56	105	540	On Request
81801 3608	250	45	70	143	280	On Request
81801 4407	500	45	86	181	360	On Request
81801 5403	1000	45	101	230	210	On Request
81801 6305	2000	45	136	267	120	On Request
81801 7301	5000	45	183	340	48	On Request
81801 8606	10000	45	230	415	30	On Request
81801 9105	20000	45	295	510	12	On Request

### Bottles, with DIN thread, Graduated, AMBER, with Dust Cover without Cap, USP / FDA conformity (DMF No. 28042) DURAN PURE DIN ISO 3585

Cat No.	Capacity ml	DIN-thread GL	O. D. mm	Height mm	Qty Per Pallet Pcs.	Maximum Price Rs/Pc
81806 1406	25	25	36	74	940	On Request
81806 2402	100	45	56	105	540	On Request
81806 3604	250	45	70	143	280	On Request
81806 4403	500	45	86	181	360	On Request
81806 5408	1000	45	101	230	210	On Request
81806 6301	2000	45	136	267	120	On Request
81806 7306	5000	45	183	340	48	On Request
81806 8602	10000	45	230	415	30	On Request
81806 9101	20000	45	295	510	12	On Request

### Premium Caps Made of PFA, Temperature Resistant from -196 °C to +200 °C, without colourants, USP/FDA conformity, (DMF No. 28044) DURAN PURE

Cat No.	Description	DMF No.	DIN-thread GL	Qty. Per Pack Pcs	Maximum Price Rs/Pc
89108 1306	Pure Premium Screw Cap	28044	25	5	On Request
89108 8679	Pure Premium Screw Cap	28044	45	5	On Request
89886 2802	Pure Premium Lip Seal Cap	031063	45	5	On Request

DURAN PURE bottles are also available in Wide Mouth GL 80 both in Plain & Amber. Please ask for details.



**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	250.00

\*Available till stocks last.

**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	Chamber mm	Fre-quency MHz	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23170 0006	Economic	5.1	178	4.94 ± 0.040	4.20 ± 0.040	0.070	100	306.00
23170 0117	Economic	178	4.97 ± 0.050	4.20 ± 0.050	0.070	300	50	369.00
23170 0211	Professional	178	4.97 ± 0.025	4.20 ± 0.025	0.030	400	50	1551.00
23170 0314	Scientific	178	4.97 ± 0.0013	4.20 ± 0.025	0.013	500	5	2889.00

**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	121.00
77610 19	B 19	10	148.00
77610 24	B 24	10	175.00
77610 29	B 29	10	192.00
77610 34	B 34	10	231.00



## CONNECTION SYSTEMS FOR DURAN LABORATORY BOTTLES

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.



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

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	8574.00

# EFFICIENT HPLC RESERVOIR BOTTLE, DURAN®

With conical base for efficient delivery of solvents

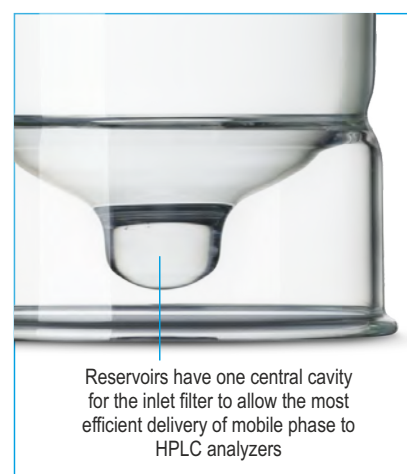
The DURAN® reservoir bottles have been specially designed for the storage and delivery of high-performance liquid chromatography (HPLC) mobile phases and solvents. Reservoirs have one central cavity for the inlet filter to allow the most efficient delivery of mobile phase to HPLC analyzers. A safer and more convenient alternative to flat bottomed glass media bottles, the conical bottom reservoirs allow a greater recovery of solvent, without having to tilt the reservoir and risk a solvent spill. The larger reservoirs allow longer, uninterrupted analyses. These are especially useful during a weekend or lengthy chromatographic analysis when there might be a risk of running out of solvents during unattended operation.

## FEATURES & BENEFITS

- Manufactured from the material of choice for solvent bottles: borosilicate 3.3 glass. This material has an exceptional chemical durability offering a very low inorganic ion extractables profile, and the total absence of any organic extractables.
- DURAN® is a borosilicate glass type 3.3 as specified by the international standard ISO 3585, and is classified as a "Type I, Class A low-expansion borosilicate glass" as defined by ASTM-E438-1992
- DURAN® glass is classified by the USP / EP / JP pharmacopoeias as a "Type I neutral glass".
- Retrace Code, and certificate for manufacturing lot traceability.
- Available in five useful sizes **1/2/3.5/5/10 Liter**.
- On the three larger sizes, the central cavity can accommodate magnetic stir bars for improved mixing.
- Side vent / drain hole in the base for ultrasonic bath degassing, or water drainage after cleaning.
- GL 45 thread fits standard HPLC connection caps.
- Durable white enamel volume graduations.
- Autoclavable at +121 °C or +134 °C.

## APPLICATIONS

- Mobile phase reservoirs for HPLC
- Reagent supply to liquid handling systems



Reservoirs have one central cavity for the inlet filter to allow the most efficient delivery of mobile phase to HPLC analyzers

### HPLC reservoir bottle, clear, conical base, GL 45, DURAN

Cat No.	Suitable for Capacity ml	Dia OD mm	Height mm	Qty Per Pack Pcs	Maximum price Rs./Pc.
21841 5407	1000	110	295	1	21165.00
21841 6309	2000	145	309	1	26965.00
21841 6909	3500	165	353	1	35662.00
21841 7305	5000	190	386	1	43962.00
21841 8601	10000	235	481	1	135954.00
<b>Accessories</b>					
29231 2801	DURAN® 3-port GL 45 HPLC delivery cap ¼"-28 thread For 3.2 mm OD tubing PTFE Complete with three ¼"-28 ETFE plugs and TFE/propylene o-ring			1	13021.00
29231 0003	DURAN® ETFE blanking plug ¼"-28 thread for 3-port HPLC GL 45 delivery cap			1	981.00

# DURAN CONNECTION SYSTEMS



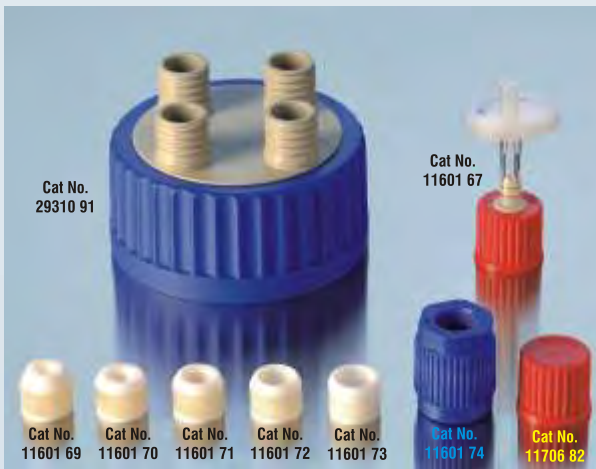
Pressure Plus Bottle with  
2 Port Connection



Pressure Plus Bottle with  
3 Port Connection



Pressure Plus Bottle with  
4 Port Connection



Screw Cap GL 80 PP Cap - 4 Port GL 18



Screw Cap GL 45 PP - 4 Port M8 and Components



Screw Cap GL 45 PP - 2 Port GL 14



Screw Cap GL 45 PP - 2/3 Port GL 14 and Components



**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	8469.00

**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	6677.00
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	3818.00
11378 01	Pressure Equalization set for 4 port cap (0.2µm including membrane filter)	1	4006.00
11298 19	Spare Membrane PTFE GL 14 for sterile pressure compensation, 0.2µm	1	1234.00
21810 54	Spare Bottle DURAN pressure plus GL 45, 1000ml	10	1261.00
10922 35	Spare Bottle DURAN pressure plus GL 45, 500ml	10	1163.00

**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	4629.00
11298 14	Screw Cap GL 14 for hose connection	2	2	624.00
11298 15	Insert for Screw Cap GL 14 1.6mm	2	1	2074.00
11298 16	Insert for Screw Cap GL 14 3.0 mm	2	1	2074.00
11377 99	Pressure equalization set (complete) (size GL 45)	2	1	4006.00
11298 17	Insert for Screw Cap GL 14 3.2mm - optional	2	1	2074.00
11298 18	Insert for Screw Cap GL 14 6.0mm - optional	2	1	2074.00



#### 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	4355.00
11562 92	Plastic Screw Cap Red, Closed, GL 14	2	293.00

#### Pouring Ring, Blue, GLS 80

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11601 66	GLS 80	10	277.00

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

Cat No.	Components	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29118 91	GLS 80	2	1154.00

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	4046.00
11601 69	Insert for Screw, 3.2mm	GL 18	2	1	2488.00
11601 72	Insert for Screw Cap, 10.0mm	GL 18	2	1	2488.00
11601 74	Screw Cap for Tube Connection, Blue	GL 18	2	2	1024.00
29310 91	Screw Cap GLS 80 PP 4 Port GL 18	GLS 80	1	2	10595.00
11706 82	Screw Cap, Red	GL 18	1	2	455.00
<b>(Optional)</b>					
11601 70	Insert for Screw Cap, 6.0mm	GL 18	2	1	2488.00
11601 71	Insert for Screw Cap, 8.0mm	GL 18	2	1	2488.00
11601 73	Insert for Screw Cap, 12.0mm	GL 18	2	1	2488.00
11601 75	Screw Cap, 4 Port, +NS29/32, PP	GLS 80	1	2	13243.00



## EXPANSION OF THE CONNECTION SYSTEMS FOR DURAN LABOTATORY 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
29310 28	GL 45 screw cap with 2 hose connectons	2	4210.00
11298 25	Filter top part for pressure equalization	2	3862.00

### 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

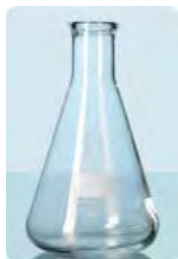
#### Application Note

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	940.00
21107 36	250	70	95	10	986.00
21107 41	400	80	110	10	1254.00
21107 48	600	90	125	10	1517.00
21107 54	1000	105	145	10	2415.00
21107 63	2000	132	185	10	4036.00
21107 73	5000	170	270	1	27688.00



**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	1598.00
21217 17	50	51	22	90	10	1618.00
21217 24	100	64	22	105	10	1569.00
21217 36	250	85	34	145	10	1146.00
21217 44	500	105	34	180	10	1632.00
21217 54	1000	131	42	220	10	2568.00
21217 63	2000	166	50	280	10	4754.00
21217 73	5000	220	52	365	1	22137.00



**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	1476.00
21227 36	250	85	50	140	10	1120.00
21227 44	500	105	50	175	10	1553.00
21227 54	1000	131	50	220	10	2460.00

### 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	39555.00
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	40877.00
12003 91	Folding magnetic stirrer for GL 45 stirred reactor, incl. shaft	45	1	34824.00
12003 90	Spare screw cap 2-ports for GL 45 stirred reactor (excl. stirrer) with GL 14 screw cap (PP, blue)	45	1	11149.00



### 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	44845.00
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	47156.00
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	48394.00



#### 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	27051.00
12003 83	Stirrer anchor type, magnetic, for GLS 80 stirred reactor	62		1	27051.00
12003 85	Spare screw cap for GLS 80 stirred reactor, PP blue/grey			1	13528.00
12003 86	Spare shaft for GLS 80 stirred reactor, stainless steel, incl. PEEK connection			1	8440.00



### 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	39434.00
11601 00	20000	1	88207.00

#### 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	48224.00
11601 10	20000	1	98078.00

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

Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11658 88	1	3954.00

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

Cat No.	Qty. Per Pack Pcs	Maximum Price Rs/Pc
11673 07	1	2226.00





**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	8408.00

**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	92.00
74200 44	500	10	115.00

**Burettes, Straight Bore Stopcock, Accuracy as per Class 'A', with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA** IS 1997 : 2008



Cat No.	Capacity ml	Graduation Division ml	Tolerance ±ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70301 60	10	0.05	0.02	530	5	2074.00
70301 70	25	0.10	0.05	530	5	2122.00
70301 75	50	0.10	0.05	780	5	2415.00
70301 80	100	0.10	0.10	830	5	3485.00

**Burettes, Rotaflow Needle Valve Stopcock, Accuracy as per Class 'A', with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA** IS 1997 : 2008



Cat No.	Capacity ml	Graduation Division ml	Tolerance ±ml	App. Total Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70401 60	10	0.05	0.02	530	5	1915.00
70401 70	25	0.10	0.05	530	5	1970.00
70401 75	50	0.10	0.05	780	5	2245.00
70401 80	100	0.10	0.10	830	5	3153.00

**Burettes, 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, EM-TECHCOLOR Brand** DIN EN ISO 385



Cat No.	Capacity ml	Graduation Division ml	Tolerance ±ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
31401 60	10	0.02	0.02	2	5594.00
31401 70	25	0.05	0.03	2	5594.00
31401 75	50	0.10	0.05	2	5594.00



**Burettes Straight Bore Stopcock, Accuracy as per Class 'B',** **IS 1997 : 2008**  
**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	705.00
70300 70	25	0.10	0.10	530	5	689.00
70300 75	50	0.10	0.10	780	5	753.00
70300 80	100	0.10	0.20	830	5	1047.00



**Burettes, Rotaflow Needle Valve Stopcock, Accuracy as per Class 'B',** **IS 1997 : 2008**  
**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	621.00
70400 70	25	0.10	0.10	530	5	584.00
70400 75	50	0.10	0.10	780	5	646.00
70400 80	100	0.10	0.20	830	5	985.00



**Burettes, Schellbach, Main Point Ring Graduation, Straight Valve Stopcock with PTFE Spindle,** **DIN EN ISO 385**  
**Blue Graduation, 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	Qty. Per Pack Pcs	Maximum Price Rs/Pc
31402 60	10	0.02	0.02	2	5436.00
31402 70	25	0.05	0.03	2	5436.00
31402 75	50	0.10	0.05	2	5436.00



**Burettes, Automatic, Straight Bore Stopcock with Glasskey, White Graduation,** **IS 1997 : 2008**  
**Accuracy as per Class 'A' , 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	7705.00
70312 70	25	1	7492.00
70312 75	50	1	8378.00
70312 80	100	1	9522.00



**Burettes, Automatic, Rotaflow Stopcock, White Graduation, Accuracy as per Class 'A',** **IS 1997 : 2008**  
**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	7469.00
70412 70	25	1	7274.00
70412 75	50	1	8073.00
70412 80	100	1	9177.00



**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	9426.00
314001 70	25	1	10596.00
314001 75	50	1	10596.00

\* 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	8943.00
314002 70	25	1	10010.00
314002 75	50	1	10010.00

\* 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** IS 1997: 2008

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70311 60	10	1	4957.00
70311 70	25	1	4876.00
70311 75	50	1	5284.00

\* 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** IS 1997: 2008

Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70411 60	10	1	4830.00
70411 70	25	1	4698.00
70411 75	50	1	5164.00

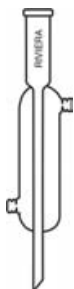
\* Reservoir Capacity : 500 ml for 10 ml and 2000 ml for 25 & 50 ml size.



**Reservoir for Automatic Burette.**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
2180 144	500	B 29	1	917.00
2180 163	2000	B 34	1	2116.00
2180 173	5000	B 34	1	9327.00





**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	Ground Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70800 20	200	345	19/15	1	398.00
70800 30	300	445	19/15	1	434.00
70800 40	400	545	19/15	1	491.00



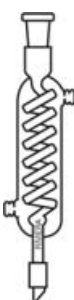
**Condensers, Liebig, Drip Tip with I/C Inner and Outer Joint,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	App. Length of Jacket mm	App. Overall Height mm	Socket Joint	Cone Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70810 20	200	350	19/26	19/26	1	463.00
70810 30	300	450	24/29	24/29	1	560.00
70810 40	400	550	24/29	24/29	1	630.00



**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	Socket Joint	Cone Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70811 20	200	350	19/26	19/26	1	604.00
70811 30	300	450	24/29	24/29	1	777.00
70811 40	400	550	24/29	24/29	1	906.00



**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	Socket Joint	Cone Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70812 30	300	450	24/29	24/29	1	926.00
70812 40	400	550	24/29	24/29	1	950.00
70812 50	500	650	24/29	24/29	1	1198.00



**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	1047.00
70813 219	200	19/26	19/26	1	1714.00
70813 319	300	19/26	19/26	1	2174.00
70813 324	300	24/29	24/29	1	2381.00
70813 329	300	29/32	29/32	1	2651.00





**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	25 x 150	10	192.00
70600 80	100	34 x 180	10	278.00



**Cylinders, Measuring, Class 'B', Graduated, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA** **IS 878 : 2008**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ±ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70700 60	10	0.2	0.20	2	292.00
70700 70	25	0.5	0.50	2	350.00
70700 75	50	1.0	1.00	2	384.00
70700 80	100	1.0	1.00	2	440.00
70700 86	250	2.0	2.00	2	806.00
70700 90	500	5.0	5.00	2	1059.00
70700 93	1000	10.0	10.00	1	1609.00



**Cylinders, Measuring, with Hexagonal Base and Short Line Graduation, Blue Graduation, Class 'B', DURAN/EM-TECHCOLOR Brand** **DIN EN ISO 4788**

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	406.00
22301 70	25	0.5	0.375	2	428.00
22301 75	50	1.0	0.750	2	470.00
22301 80	100	1.0	0.750	2	536.00
22301 86	250	2.0	1.500	2	981.00
22301 90	500	5.0	3.750	2	1289.00
22301 93	1000	10.0	7.500	1	2101.00
22301 94	2000	20.0	15.000	1	4153.00



**Cylinders, Measuring, Class 'A', Graduated, with Individual Certificate of Performance, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA** **IS 878 : 2008**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ±ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
70703 60	10	0.2	0.10	2	541.00
70703 70	25	0.5	0.25	2	621.00
70703 75	50	1.0	0.50	2	748.00
70703 80	100	1.0	0.50	2	851.00
70703 86	250	2.0	1.00	2	1259.00
70703 90	500	5.0	2.50	2	1760.00
70703 93	1000	10.0	5.00	1	2151.00





Cylinders, Measuring, with Hexagonal Base and Main Point Ring Graduation, **Blue** Graduation, **DIN EN ISO 4788**  
Conformity Certified, with Batch Certificate, Class 'A', DURAN

Cat No.	Capacity ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21390 0804	10	0.10	2	723.00
21390 1406	25	0.25	2	834.00
21390 1706	50	0.50	2	1005.00
21390 2402	100	0.50	2	1141.00
21390 3604	250	1.00	2	1685.00
21390 4403	500	2.50	2	2347.00
21390 5408	1000	5.00	1	2869.00
21390 6301	2000	10.00	1	5575.00



Cylinders, Measuring, with Hexagonal Base and Main Point Ring Graduation, Blue Graduation, **DIN EN ISO 4788**  
Conformity Certified, with Batch Certificate,  
Calibrated at 3 Graduation levels for accuracy and tolerance, Class 'A', DURAN/EM-TECHCOLOR Brand

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22401 60	10	0.2	0.100	2	657.00
22401 70	25	0.5	0.250	2	758.00
22401 75	50	1.0	0.500	2	914.00
22401 80	100	1.0	0.500	2	1037.00
22401 86	250	2.0	1.000	2	1532.00
22401 90	500	5.0	2.500	2	2134.00
22401 93	1000	10.0	5.000	1	2608.00
22401 94	2000	20.0	10.000	1	5068.00



Cylinders, Measuring, with Hexagonal Base and Main Point Ring Graduation, **Schellbach**, **DIN EN ISO 4788**  
**Blue** Graduation, Conformity Certified, with Batch Certificate,  
Calibrated at 3 Graduation levels for accuracy and tolerance, Class 'A', DURAN/EM-TECHCOLOR Brand

Cat No.	Capacity ml	Graduation Division ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
22201 60	10	0.2	0.100	2	1120.00
22201 70	25	0.5	0.250	2	1137.00
22201 75	50	1.0	0.500	2	1168.00
22201 80	100	1.0	0.500	2	1229.00
22201 86	250	2.0	1.000	2	2696.00
22201 90	500	5.0	2.500	2	2840.00
22201 93	1000	10.0	5.000	1	4023.00
22201 94	2000	20.0	10.000	1	10049.00



Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'B', Graduated, **IS 878 : 2008**  
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	449.00
70701 70	25	B 14	2	500.00
70701 75	50	B 14	2	564.00
70701 80	100	B 19	2	696.00
70701 86	250	B 24	2	1179.00
70701 90	500	B 34	2	1633.00
70701 93	1000	B 34	1	2358.00



**Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'B',** **DIN EN ISO 4788**  
**Made from DURAN/EM-TECHCOLOR Brand**

Cat No.	Capacity ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
223000 60	10	B 10	2	682.00
223010 70	25	B 14	2	754.00
223010 75	50	B 14	2	820.00
223020 80	100	B 19	2	902.00
223030 86	250	B 24	2	1529.00
223050 90	500	B 34	2	2024.00
223050 93	1000	B 34	1	3091.00
223050 94	2000	B 34	1	4901.00



**Cylinders, Measuring, with I/C Joint & Glass Stopper, Class 'A', Conformity Certified, with** **DIN EN ISO 4788**  
**Batch Certificate, Calibrated at 3 Graduation levels for accuracy and tolerance, Made from DURAN/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	1174.00
224010 70	25	B 14	2	1311.00
224010 75	50	B 14	2	1581.00
224020 80	100	B 19	2	1816.00
224030 86	250	B 24	2	2582.00
224050 90	500	B 34	2	3340.00
224050 93	1000	B 34	1	4157.00
224050 94	2000	B 34	1	6641.00

**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	4238.00
74300 57	160	230	1	4566.00
74300 61	210	300	1	5210.00
74300 66	240	340	1	6825.00
74300 69	300	420	1	8349.00



**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	14598.00
24781 57	150	252	1	15654.00
24781 61	200	309	1	18406.00
24781 66	250	357	1	23693.00
24781 69	300	433	1	25806.00



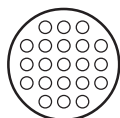
**Desiccators, Vacuum, Clear Glass, RIVIERA**

Cat No.	Max. I. D. mm	Overall Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
74310 46	120	227	1	6900.00
74310 57	160	285	1	8274.00
74310 61	210	347	1	8608.00
74310 66	240	381	1	12087.00
74310 69	300	467	1	18486.00

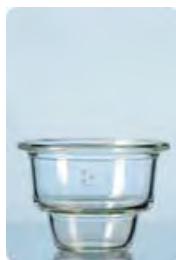




Desiccators, Vacuum, with Flat Flanges and NOVUS NS Junction, Outlet in Lid, with Stopcock, DURAN					DIN 12491
Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
24782 46	100	174	1	22378.00	
24782 57	150	239	1	28374.00	
24782 61	200	296	1	29550.00	
24782 66	250	344	1	46805.00	
24782 69	300	420	1	61169.00	



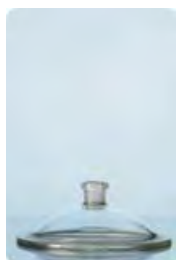
Porcelain Plates for All Desiccators, RIVIERA				
Cat No.	DN	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
74320 46	100	1	184.00	
74320 57	150	1	259.00	
74320 61	200	1	368.00	
74320 66	240	1	443.00	
74320 69	300	1	696.00	



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	8248.00	
24770 57	150	81	1	9519.00	
24770 61	200	115	1	15654.00	
24770 66	250	120	1	16287.00	
24770 69	300	150	1	21157.00	



Lid for Plane Desiccator, DURAN					
Cat No.	DN	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
24410 46	100	75	1	8248.00	
24410 57	150	98	1	11208.00	
24410 61	200	107	1	11632.00	
24410 66	250	122	1	12479.00	
24410 69	300	150	1	14383.00	



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	10367.00
24420 57	150	B 24	85	1	14813.00
24420 61	200	B 24	94	1	15231.00
24420 66	250	B 24	109	1	24320.00
24420 69	300	B 24	137	1	37861.00

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	6597.00



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	475.00
71600 54	900	140 x 75	4	820.00
71600 59	2000	190 x 90	1	1378.00



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	641.00
21311 54	900	140 x 75	10	1105.00
21311 59	2000	190 x 90	10	1919.00



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	80 x 45	10	421.00
71700 44	170	105 x 55	2	597.00
71700 54	600	150 x 80	2	1114.00



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	851.00
21301 44	170	95 x 55	10	1228.00
21301 54	600	140 x 80	10	2072.00



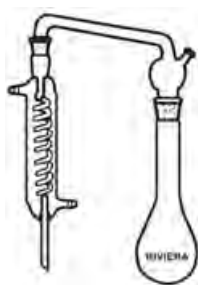
Dishes, Petri, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA				
Cat No.	O. D. x Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc	
71500 40	50 x 17	10	164.00	
71500 42	80 x 17	10	180.00	
71500 48	100 x 17	10	186.00	
71500 52	150 x 20	10	464.00	
71500 59	200 x 20	10	974.00	





**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	200.00
23755 42	80 x 15	10	220.00
23755 48	100 x 20	10	228.00
23755 52	150 x 25	10	567.00
23755 59	200 x 30	10	1188.00



**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.

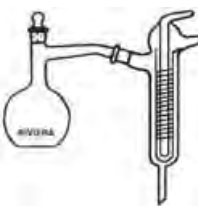
Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73300 05	500	1	3414.00



**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.

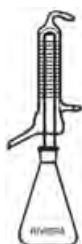
Cat No.	Capacity ml	Condenser Jacket Length mm	I/C Joint	Qty. Per Pack Pcs	Maximum Price Rs/Pc
73400 05	500	200	19/26	1	3414.00



**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	4230.00



**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	4054.00

**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	2811.00



**Extraction Apparatus, Soxhlet, Complete with Alihn 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	1843.00
73000 25	100	250	1	2253.00
73000 50	200	500	1	3362.00



**Condensers, Alihn, 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	708.00
73020 25	40/38	1	858.00
73020 50	50/42	1	1211.00



**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	932.00
73010 25	100	40/38	24/29	1	1345.00
73010 50	200	50/42	24/29	1	1609.00



**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	156.00
73030 250	250	1	167.00
73030 500	500	1	246.00



**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	37	15	60	10	87.00
71400 14	25	42	22	75	10	94.00
71400 17	50	51	22	90	10	94.00
71400 24	100	64	22	105	10	93.00
71400 29	150	72	28	124	10	120.00
71400 36	250	85	34	145	10	143.00
71400 44	500	105	34	180	10	202.00
71400 54	1000	131	50	220	10	345.00
71400 63	2000	166	52	280	4	609.00
71400 68	3000	187	50	310	1	1707.00
71400 73	5000	220	50	365	1	2767.00



**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	206.00
21216 17	50	51	22	90	10	200.00
21216 24	100	64	22	105	10	127.00
21990 27	150	74	28	118	10	156.00
21216 36	250	85	34	145	10	191.00
21216 44	500	105	34	180	10	271.00
21216 54	1000	131	42	220	10	462.00
21216 63	2000	166	50	280	10	803.00
21216 68	3000	187	51	310	2	2298.00
21216 73	5000	220	51	365	1	3552.00



**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	503.00
21803 445	500	10	631.00
21803 545	1000	10	1203.00



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**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	324.00
208020 14	25	B 19	10	324.00
208030 14	25	B 24	10	324.00
208010 17	50	B 14	10	322.00
208020 17	50	B 19	10	322.00
208030 17	50	B 24	10	322.00
208010 24	100	B 14	10	305.00
208020 24	100	B 19	10	305.00
208030 24	100	B 24	10	305.00
208040 24	100	B 29	10	324.00
208020 36	250	B 19	10	399.00
208030 36	250	B 24	10	399.00
208040 36	250	B 29	10	411.00
208050 36	250	B 34	10	522.00
208020 44	500	B 19	4	563.00
208030 44	500	B 24	4	563.00
208040 44	500	B 29	4	563.00
208050 44	500	B 34	4	605.00
208030 54	1000	B 24	2	845.00
208040 54	1000	B 29	2	845.00
208050 54	1000	B 34	2	845.00
208030 63	2000	B 24	2	1379.00
208040 63	2000	B 29	2	1379.00
208050 63	2000	B 34	2	1379.00

Available in RIVIERA Brand — Prices on Request




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**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	440.00
209020 14	25	B 19	10	440.00
209030 14	25	B 24	10	440.00
209010 17	50	B 14	10	434.00
209020 17	50	B 19	10	434.00
209030 17	50	B 24	10	434.00
209020 24	100	B 19	10	492.00
209030 24	100	B 24	10	492.00
209030 36	250	B 24	10	535.00
209040 36	250	B 29	10	555.00
209030 44	500	B 24	4	737.00
209040 44	500	B 29	4	737.00
209030 54	1000	B 24	2	1014.00
209040 54	1000	B 29	2	1014.00
209030 63	2000	B 24	2	1673.00
209040 63	2000	B 29	2	1673.00
209050 63	2000	B 34	2	1690.00

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	243.00
74400 36	250	B 24	10	307.00
74400 44	500	B 24	10	394.00
74400 54	1000	B 24	10	680.00



**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	70	34	110	24	108.00
71410 36	250	85	50	142	6	158.00
71410 44	500	105	50	175	6	243.00
71410 54	1000	130	56	220	6	426.00



**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	271.00
21226 17	50	51	34	85	10	264.00
21226 24	100	64	34	105	10	185.00
21226 36	250	85	50	140	10	289.00
21226 44	500	105	50	175	10	454.00
21226 54	1000	131	50	220	10	764.00
21226 63	2000	153	72	276	10	1314.00

# DURAN BAFFLED FLASKS

## Why use baffled flasks?

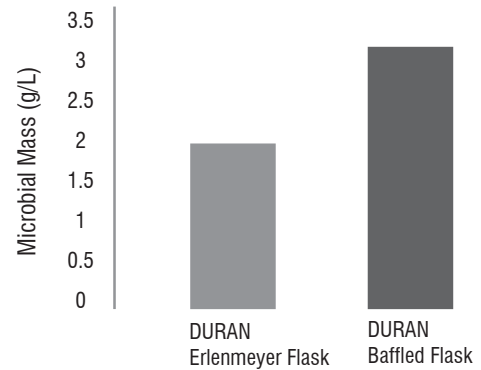
- Due to limited oxygen transfer, cell growth is restricted in standard Erlenmeyer flasks.
- Larger surface of the content results in a higher possible oxygen intake due to increased gas exchange area.
- Baffled flasks
  - interrupt the laminar flow to create a turbulent flow
  - increase the surface 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 36	DURAN baffled flask, GL 45 with bottom baffles, without cap	250	4	3259.00
21283 44	DURAN baffled flask, GL 45 with bottom baffles, without cap	500	4	3798.00
21283 54	DURAN baffled flask, GL 45 with bottom baffles, without cap	1000	1	5266.00
29118 28	DURAN PP Membrane Cap with a PTFE permeable foil	GL 45	5	828.00
29242 28	DURAN PP Pouring Ring, Blue	GL 45	10	36.00



**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	94.00
73900 17	50	51	26	90	10	103.00
73900 24	100	64	26	105	10	118.00
73900 29	150	75	28	132	10	133.00
73900 36	250	85	34	140	10	133.00
73900 44	500	105	34	165	10	218.00
73900 54	1000	131	42	190	10	305.00
73900 64	2000	166	50	230	6	596.00
73900 68	3000	186	50	300	1	1726.00
73900 73	5000	224	58	320	1	2781.00
73900 86	10000	279	65	360	1	5936.00



**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	212.00
21711 44	500	105	34	171	10	323.00
21711 54	1000	131	42	200	10	455.00
21711 64	2000	166	42	250	10	992.00
21711 68	3000	185	50	250	1	2689.00
21711 73	5000	223	50	290	1	4331.00



**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	3860.00
24120 46	500	101	170	10	4306.00
24120 56	1000	126	210	10	5594.00



**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	92.00
74000 17	50	51	26	95	10	100.00
74000 24	100	64	26	110	10	115.00
74000 29	150	75	28	137	10	130.00
74000 36	250	85	34	143	10	130.00
74000 44	500	105	34	168	10	213.00
74000 54	1000	131	42	200	10	298.00
74000 64	2000	166	51	240	6	573.00
74000 68	3000	190	50	305	1	1625.00
74000 73	5000	224	58	350	1	2624.00
74000 86	10000	279	65	380	1	5650.00
74000 91	20000	350	78	505	1	10257.00

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

DIN 12347, ISO 1773



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	171.00
21721 44	500	105	34	175	10	273.00
21721 54	1000	131	42	200	10	396.00
21721 64	2000	166	42	260	10	1152.00
21721 68	3000	185	50	260	1	2294.00
21721 73	5000	223	50	305	1	3691.00
21721 86	10000	279	65	420	1	7980.00
21721 91	20000	345	76	515	1	14745.00

**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	347.00
72100 36	250	87	34	145	10	492.00
72100 44	500	107	34	175	10	599.00
72100 54	1000	138	45	230	10	908.00
72100 63	2000	168	45	275	4	1822.00
72100 73	5000	237	55	390	4	6859.00

**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	2085.00
21201 36	250	85	35	155	10	2334.00
21201 44	500	105	34	185	10	2602.00
21201 54	1000	135	45	230	10	4010.00
21201 63	2000	166	60	255	1	4770.00

**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	12648.00
21191 73	5000	185	70	360	1	21147.00
21191 86	10000	240	70	420	1	28995.00
21191 91	20000	290	75	535	1	50594.00



**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	364.00
22253 25	125	68 x 214	19	5	399.00
22253 36	250	88 x 226	24	2	500.00
22253 44	500	110 x 250	28	2	647.00
22253 54	1000	130 x 305	30	1	819.00
22253 64	2000	170 x 318	40	1	1367.00



**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	678.00
74500 51	800	118	34	365	6	829.00



**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	850.00
74501 51	800	B 24	6	938.00



**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	1460.00
21231 51	750	115	34	340	10	1814.00



**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	1790.00
217030 51	750	B 24	10	2138.00



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 ±ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71022 55	5	0.02	10/19	20	922.00
71022 60	10	0.02	10/19	20	795.00
71022 65	20	0.03	10/19	20	795.00
71022 70	25	0.03	10/19	20	745.00
71022 75	50	0.05	10/19	20	729.00
71022 80	100	0.08	14/23	20	714.00
71022 85	200	0.10	14/23	12	986.00
71022 86	250	0.12	14/23	12	993.00
71022 90	500	0.15	19/26	12	1316.00
71022 93	1000	0.30	19/26	12	1913.00



Flasks, Volumetric, **Class 'A', USP,** with Ergonomic Polyethylene Stopper, **Blue** Graduation, **DIN EN ISO 1042**  
 USP Conformity, with USP **Individual Certificate,** DURAN

Cat No.	Capacity ml	Tolerance ±ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24671 1054	10	0.02	10/19	2	958.00
24671 1457	25	0.03	10/19	2	897.00
24671 1757	50	0.05	12/21	2	972.00
24671 2556	100	0.08	14/23	2	965.00



Flasks, Volumetric, **Class 'A', USP,** with Polyethylene Stopper **DIN EN ISO 1042**  
**Blue** Graduation, Conformity Certified, with Batch Certificate - DURAN/EM-TECHCOLOR Brand

Cat No.	Capacity ml	Tolerance ±ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
28201 5327	5	0.02	10/19	10	1208.00
28201 6127	10	0.02	10/19	10	958.00
28201 6527	20	0.03	10/19	10	958.00
28201 7027	25	0.03	10/19	10	897.00
28201 7527	50	0.05	12/21	10	972.00
28201 8027	100	0.08	12/21	10	965.00
28201 8527	200	0.10	14/23	10	1574.00
28201 8627	250	0.12	14/23	10	1305.00
28201 8927	500	0.15	19/26	10	1734.00
28201 9327	1000	0.30	24/29	1	2513.00
28201 9427	2000	0.50	29/32	1	4387.00

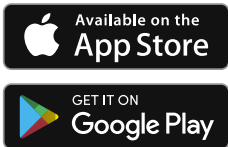


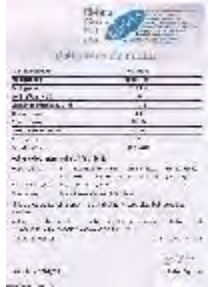
Available in AMBER - Price on Request

NEW

Riviera Individually calibrated  
Volumetric Flasks USP  
Volumetric Flasks Class A  
Measuring Cylinders Class A  
Volumetric Pipettes Class A  
Burettes & Automatic Burettes Class A



Now ACCESS your  
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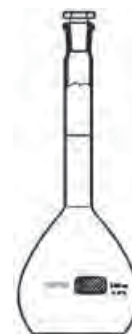
STEP 1	STEP 2	STEP 3	STEP 4
 <p>Download Riviera Glass - Certificates App</p>	 <p>Enter the Individual Traceability No. Printed on the Glassware and Click GO</p>	 <p>Download the Certificate</p>	 <p>Store Certificate in pdf Format or Print</p>

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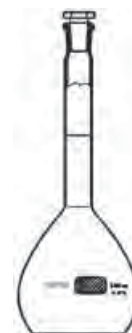


Flasks, Volumetric, with Interchangeable Glass Stopper, Accuracy as per Class 'A', **IS 915:2012**  
**Amber** Stained Marking, with Individual Certificate of Performance,  
 Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA



Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71029 55	5	0.025	10/19	20	854.00
71029 60	10	0.025	10/19	20	737.00
71029 65	20	0.040	10/19	20	737.00
71029 70	25	0.040	10/19	20	687.00
71029 75	50	0.060	10/19	20	649.00
71029 80	100	0.100	14/23	20	633.00
71029 85	200	0.150	14/23	12	893.00
71029 86	250	0.150	14/23	12	899.00
71029 90	500	0.250	19/26	12	1171.00
71029 93	1000	0.400	19/26	12	1698.00

Flasks, Volumetric, with Interchangeable Glass Stopper, Accuracy as per Class 'A', **IS 915:2012**  
**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	10/19	20	854.00
71020 60	10	0.025	10/19	20	737.00
71020 65	20	0.040	10/19	20	737.00
71020 70	25	0.040	10/19	20	687.00
71020 75	50	0.060	10/19	20	649.00
71020 80	100	0.100	14/23	20	633.00
71020 85	200	0.150	14/23	12	893.00
71020 86	250	0.150	14/23	12	899.00
71020 90	500	0.250	19/26	12	1171.00
71020 93	1000	0.400	19/26	12	1698.00

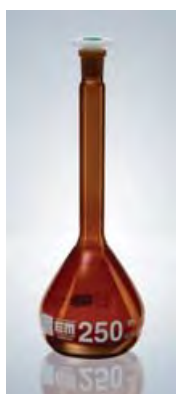
Flasks, Volumetric, Class 'A', with Ergonomic Stopper, **Blue** Graduation, **DIN EN ISO 1042**  
 with **Individual Certificate** and Certificate of Conformity, DURAN



Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
24679 0957	5	0.040	10/19	2	1052.00
24679 1053	10	0.040	10/19	2	872.00
24679 1259	20	0.040	10/19	2	872.00
24679 1456	25	0.040	10/19	2	812.00
24679 1756	50	0.060	12/21	2	777.00
24679 2452	100	0.100	12/21	2	769.00
24679 3251	200	0.150	14/23	2	1252.00
24679 3654	250	0.150	14/23	2	1038.00
24679 4453	500	0.250	19/26	2	1381.00
24679 5458	1000	0.400	24/29	2	2002.00
24679 6351	2000	0.600	29/32	2	3496.00


**Flasks, Volumetric, Class 'A', with Polyethylene Stopper**
**DIN EN ISO 1042**
**Blue Graduation, Conformity Certified, with Batch Certificate - DURAN/EM-TECHCOLOR Brand**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
28201 53	5	0.040	10/19	10	1052.00
28201 61	10	0.040	10/19	10	834.00
28201 65	20	0.040	10/19	10	834.00
28201 70	25	0.040	10/19	10	777.00
28201 75	50	0.060	12/21	10	777.00
28201 80	100	0.100	12/21	10	769.00
28201 85	200	0.150	14/23	10	1252.00
28201 86	250	0.150	14/23	10	1038.00
28201 90	500	0.250	19//26	10	1381.00
28201 93	1000	0.400	24/29	1	2002.00
28201 94	2000	0.600	29/32	1	3496.00


**Flasks, Volumetric, Class 'A', with Polyethylene Stopper, AMBER,**
**DIN EN ISO 1042**
**Conformity Certified, with Batch Certificate - DURAN/EM-TECHCOLOR Brand**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
26401 53	5	0.040	10/19	10	1399.00
26401 61	10	0.040	10/19	10	1163.00
26401 65	20	0.040	10/19	10	1073.00
26401 70	25	0.040	10/19	10	1169.00
26401 75	50	0.060	12/21	10	1179.00
26401 80	100	0.100	12/21	10	1315.00
26401 85	200	0.150	14/23	10	1852.00
26401 86	250	0.150	14/23	10	1715.00
26401 90	500	0.250	19/26	10	2281.00
26401 93	1000	0.400	24/29	1	3522.00


**Flasks, Volumetric, Trapezoidal Shape, Class 'A', with Polyethylene Stopper**
**DIN EN ISO 1042**
**Blue Graduation, Conformity Certified, with Batch Certificate - DURAN/EM-TECHCOLOR Brand**

Cat No.	Capacity ml	Tolerance $\pm$ ml	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
29601 33	1	0.025	7/19	2	1629.00
29601 40	2	0.025	7/16	2	1656.00
29601 53	5	0.040	10/19	2	1698.00
29601 61	10	0.040	10/19	2	1745.00
29601 65	20	0.040	10/19	2	1801.00
29601 70	25	0.040	10/19	2	1868.00
29601 75	50	0.060	12/21	2	1927.00



Flasks, Volumetric, with I/C Glass Stopper, **Amber** Stained Marking, IS 915:2012  
 Accuracy as per Class 'B', 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
71019 55	5	0.05	10/19	20	264.00
71019 60	10	0.05	10/19	20	250.00
71019 65	20	0.08	10/19	20	250.00
71019 70	25	0.08	10/19	20	244.00
71019 75	50	0.12	10/19	20	269.00
71019 80	100	0.20	14/23	20	306.00
71019 85	200	0.30	14/23	12	349.00
71019 86	250	0.30	14/23	12	362.00
71019 90	500	0.50	19/26	12	488.00
71019 93	1000	0.80	19/26	12	730.00



Flasks, Volumetric, with I/C Glass Stopper, **White** coloured Marking IS 915:2012  
 Accuracy as per Class 'B', 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	10/19	20	264.00
71000 60	10	0.05	10/19	20	250.00
71000 65	20	0.08	10/19	20	250.00
71000 70	25	0.08	10/19	20	244.00
71000 75	50	0.12	10/19	20	269.00
71000 80	100	0.20	14/23	20	306.00
71000 85	200	0.30	14/23	12	349.00
71000 86	250	0.30	14/23	12	362.00
71000 90	500	0.50	19/26	12	488.00
71000 93	1000	0.80	19/26	12	730.00



Flasks, Volumetric, with I/C Glass Stopper, **AMBER**, Accuracy as per Class 'B', IS 915:2012  
**White** coloured Marking, Made from Heat Resistant,  
 Low Expansion Borosilicate Glass, RIVIERA

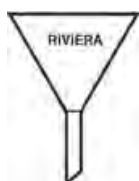
Cat No.	Capacity ml	Capacity Tolerance ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71010 55	5	0.05	10/19	20	405.00
71010 60	10	0.05	10/19	20	384.00
71010 65	20	0.08	10/19	20	384.00
71010 70	25	0.08	10/19	20	368.00
71010 75	50	0.12	10/19	20	384.00
71010 80	100	0.20	14/23	20	427.00
71010 85	200	0.30	14/23	12	484.00
71010 86	250	0.30	14/23	12	499.00
71010 90	500	0.50	19/26	12	715.00
71010 93	1000	0.80	19/26	12	1119.00





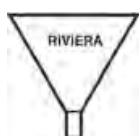
**Poly Stoppers for Volumetric Flasks, Class 'A', EM-TECHCOLOR**

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	92.00
89002 65	12 / 21	50 to 100	10	113.00
89002 70	14 / 23	200 to 250	10	127.00
89002 75	19 / 26	500	10	127.00
89002 80	24 / 29	1000	10	152.00
89002 86	29 / 32	2000	10	232.00



**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	112.00
73100 38	65	6	136.00
73100 41	75	6	142.00
73100 46	100	2	194.00



**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	404.00
73100 48	150	2	433.00
73100 50	200	2	1165.00



**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	14/23	2	1032.00



**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	19/26	2	1369.00
21114 36	250	19/26	2	1572.00
21114 44	500	24/29	1	2049.00
21114 54	1000	29/32	1	2551.00



**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	14/23	2	1153.00



**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	19/26	2	1308.00
21115 36	250	19/26	2	1473.00
21115 44	500	24/29	1	1915.00
21115 54	1000	29/32	1	2485.00

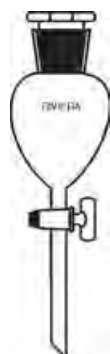
**Funnels, Separating, Globe Shape, with Rotaflow Stopcock & I/C Stopper,  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Capacity ml	Stopper Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
21113 25	125	19/26	2	1239.00



**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	19/26	2	1523.00
21113 44	500	24/29	1	1920.00
21113 54	1000	29/32	1	2428.00
21113 63	2000	29/32	1	4447.00



**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	19/26	2	1239.00

**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	19/26	2	1523.00
21112 44	500	24/29	1	1920.00
21112 54	1000	29/32	1	2428.00
21112 63	2000	29/32	1	4447.00

**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	356.00
72000 152	15	G 2	10	356.00
72000 153	15	G 3	10	356.00
72000 154	15	G 4	10	356.00
72000 301	30	G 1	10	494.00
72000 302	30	G 2	10	494.00
72000 303	30	G 3	10	494.00
72000 304	30	G 4	10	494.00
72000 501	50	G 1	10	555.00
72000 502	50	G 2	10	555.00
72000 503	50	G 3	10	555.00
72000 504	50	G 4	10	555.00



**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	2493.00
25851 12	15	G 2	10	2493.00
25851 13	15	G 3	10	2493.00
25851 14	15	G 4	10	2810.00
25851 21	30	G 1	10	2120.00
25851 22	30	G 2	10	2120.00
25851 23	30	G 3	10	2120.00
25851 24	30	G 4	10	2226.00
25851 31	50	G 1	10	2972.00
25851 32	50	G 2	10	2972.00
25851 33	50	G 3	10	2972.00
25851 34	50	G 4	10	3076.00



**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	525.00
72010 0352	35	G 2	1	525.00
72010 0353	35	G 3	1	525.00
72010 0354	35	G 4	1	525.00
72010 0801	80	G 1	1	1036.00
72010 0802	80	G 2	1	1036.00
72010 0803	80	G 3	1	1036.00
72010 0804	80	G 4	1	1036.00
72010 2001	200	G 1	1	1653.00
72010 2002	200	G 2	1	1653.00
72010 2003	200	G 3	1	1653.00
72010 2004	200	G 4	1	1653.00

**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	4696.00
25852 02	50	G 2	1	4696.00
25852 03	50	G 3	1	4696.00
25852 04	50	G 4	1	4897.00
25852 11	75	G 1	1	4996.00
25852 12	75	G 2	1	4996.00
25852 13	75	G 3	1	4996.00
25852 14	75	G 4	1	5496.00
25852 21	125	G 1	1	6596.00
25852 22	125	G 2	1	6596.00
25852 23	125	G 3	1	6596.00
25852 24	125	G 4	1	6994.00
25852 31	500	G 1	1	14210.00
25852 32	500	G 2	1	14210.00
25852 33	500	G 3	1	14210.00
25852 34	500	G 4	1	15378.00
25852 41	1000	G 1	1	21106.00
25852 42	1000	G 2	1	21106.00
25852 43	1000	G 3	1	21106.00
25852 44	1000	G 4	1	21635.00

**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	4552.00
72020 902	90	G 2	1	4552.00
72020 903	90	G 3	1	4552.00
72020 904	90	G 4	1	4552.00

## 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**

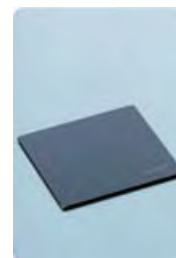
Application ranging from -200°C to +700°C. A particular advantage of CERAN laboratory protective plate is their high continuous operation temperature.

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	2997.00
23821 57	155 x 155	1	3196.00
23821 58	175 x 175	1	3718.00



**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	689.00
71800 200	200 x 150	1	899.00
71800 250	250 x 150	1	1378.00
71800 300	300 x 200	1	3673.00



**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	20846.00
24460 66	255 x 260	1	27025.00
24460 69	300 x 315	1	39998.00



**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	7719.00
21363 11	120 x 100 x 050	1	8370.00
21363 13	130 x 130 x 050	1	11609.00
21363 19	150 x 150 x 050	1	12625.00
21363 47	210 x 210 x 100	1	22873.00
21363 58	250 x 250 x 140	1	37600.00





### 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	

1 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	

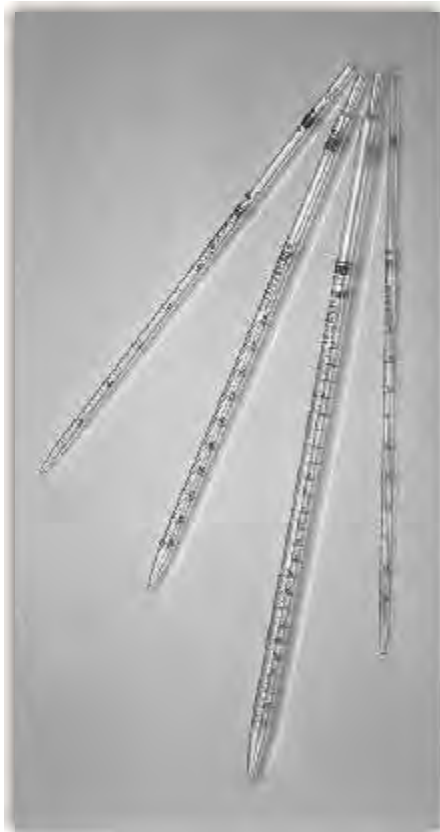
**Pipettes, Graduated, Clear Glass, Short - Line, Graduated to Tip, Amber Stain Graduation, (Serological type), Class 'B', RIVIERA Brand**

Cat No.	Capacity ml	Graduation Division ml	Tolerance ± ml	Total Length ±5mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72600 14	0.10	0.01	0.01	320	10	156.00
72600 21	0.20	0.02	0.01	320	10	149.00
72600 29	0.50	0.05	0.01	320	10	145.00
72600 33	1.00	0.01	0.01	350	10	142.00
72600 41	2.00	0.02	0.02	350	10	156.00
72600 53	5.00	0.05	0.05	350	10	172.00
72600 60	10.0	0.10	0.10	350	10	180.00
72600 70	25.0	0.20	0.20	470	10	282.00



# 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

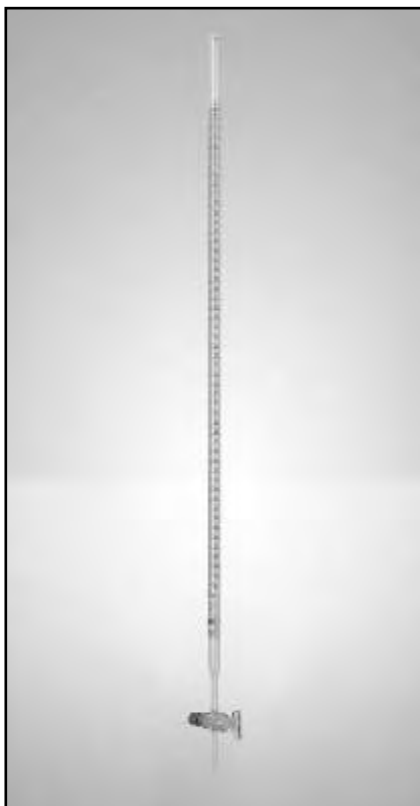


In the case of a convex meniscus, e. g. mercury, the German Industrial Standard DIN/ISO 384 and DIN 12700 requires the volume to be read at the highest point of the liquid's surface. The highest point of the meniscus must cover the lower edge of the graduation mark.



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 Laborgeräte

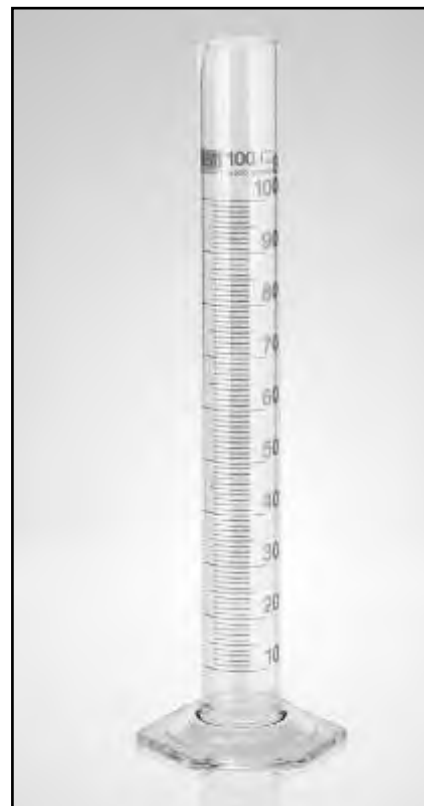


Schellbach Burette, class 'AS'  
EM-Techcolor

Download Batch Certificate  
directly from website  
[www.hirschmannlab.com](http://www.hirschmannlab.com)



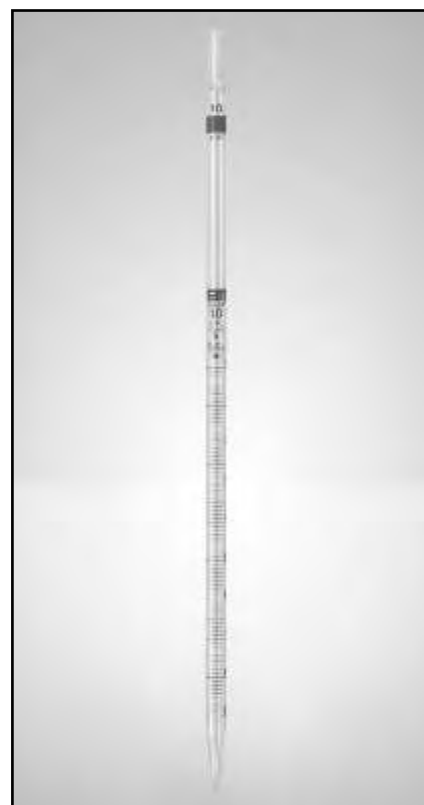
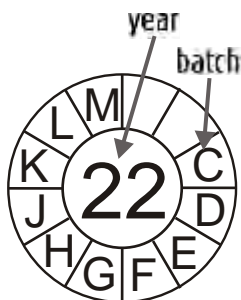
Volumetric flask, class 'A'  
EM-Techcolor



Measuring cylinder, class 'A'  
EM-Techcolor



Volumetric pipette, class 'AS'  
EM-Techcolor



Schellbach graduated pipette,  
EM-Techcolor

# CERTIFICATE

## HIRSCHMANN®

### ISO 9001:2015

DEKRA Certification GmbH hereby certifies that the organization

**Hirschmann Laborgeräte GmbH & Co. KG**

**Scope of certification:**

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

**Certified location:**

Hauptstraße 7-15, 74246 Eberstadt, Germany

has established and maintains a quality management system according to the above mentioned standard. The conformity was adduced with audit report no. 51429-Z3-00.

Certificate registration no.:	91114758/2	Certificate valid from:	2020-11-27
Validity of previous certificate:	2020-11-26	Certificate valid to:	2023-11-26

Language translation



Dr. Gerhard Nagel  
DEKRA Certification GmbH, Stuttgart, 2020-11-19



# CERTIFICATE

## HIRSCHMANN®

### EN ISO 13485:2016

DEKRA Certification GmbH hereby certifies that the organization

**Hirschmann Laborgeräte GmbH & Co. KG**

**Scope of certification:**

Design, development, production and distribution of glass products and volumetric measuring apparatus for use in in-vitro diagnostic

**Certified location:**

Hauptstraße 7-15, 74246 Eberstadt, Germany

has established and maintains a quality management system according to the above mentioned standard. The conformity was adduced with audit report no. 51429-Z3-00.

Certificate registration no.:	51429-14-01	Certificate valid from:	2020-11-27
Validity of previous certificate:	2020-11-26	Certificate valid to:	2023-11-26



Ruth Delbeck-Bayer  
DEKRA Certification GmbH, Stuttgart, 2020-11-19



## Recognition of DAkkS under Indian Regulation of NABL

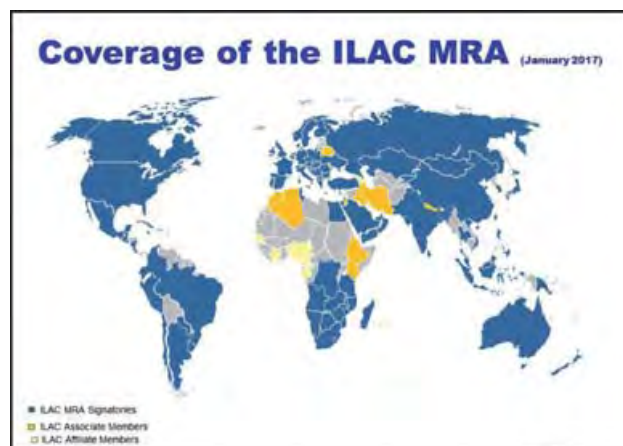
Hirschmann Laborgerate GmbH & Co. KG has been given Accreditation by DAkkS (Deutsche Akkreditierungsstelle GmbH) as competent to carry out calibrations. This accreditation implies that Hirschmann has the right to issue internationally recognized certificates for volumetric measuring instruments. Therefore, the tested quality of each product is not only documented but the certification represents the rigorous testing procedures as well as the excellence of the quality management systems. The DAkkS calibration certificate includes all measured values and measuring uncertainty of the tested device based on international norms. DAkkS is signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition.

DAkkS and NABL are connected and mutually recognized through the ILAC Organization. ILAC (International Laboratory Accreditation Cooperation) is the international organization for accreditation bodies operating in accordance with ISO/IEC 17011 and involved in the accreditation of Conformity Assessment Bodies including Calibration Laboratories (using ISO/IEC 17025), Testing Laboratories (using ISO/IEC 17025), Medical Testing Laboratories (using ISO 15189) and Inspection Bodies (using ISO/IEC 17020).

Accreditation allows you to make an informed decision when selecting an organization to carry out your testing, calibration, or inspection activities, as it demonstrates competence, impartiality and capability of that organization. As a result, accreditation helps to underpin the credibility, safety and performance of goods and services.

Accreditation bodies around the world, which have been evaluated by peers as competent, have signed an arrangement that enhances the acceptance of products and services across national borders. The purpose of this arrangement, the ILAC Mutual Recognition

Arrangement (MRA), (often referred to as ILAC Arrangement) is to create an international framework to support international trade through the removal of technical barriers.



In many economies there is an accreditation body recognized by government and industry (in India NABL) to carry out the assessment and verification against international standards of testing, calibration, inspection and certification activities in both the private and public sectors. ILAC is an organization that counts as its members laboratory accreditation bodies, regional organizations and stakeholders representing over 110 economies. The ILAC MRA allows making use of a global network of testing and calibration laboratories and inspection bodies that have been accredited to provide accurate and reliable results. The ILAC MRA acts as an internationally recognized 'stamp of approval' to demonstrate compliance against agreed standards and requirements. Accreditation and the ILAC MRA help regulators meet their own legislated responsibilities by providing a globally recognized system to accept accredited test and inspection reports.

### Signatories to the ILAC Mutual Recognition Arrangement

No.	Accreditation Body	Economy	Scope	Original Signing Date
29	Comite Francais d'Accreditation (COFRAC)	France	38 Testing ISO/IEC 17025 & ISO 15189 Calibration ISO/IEC 17025 Inspection ISO/IEC 17020	02 Nov 2000 02 Nov 2000 24 Oct 2012
30	<sup>(90)</sup> Deutsche Akkreditierungsstelle GmbH (DAkkS)	Germany	39 Testing ISO/IEC 17025 & ISO 15189 Calibration ISO/IEC 17025 Inspection ISO/IEC 17020	02 Nov 2000 02 Nov 2000 24 Oct 2012
31	<sup>(10)</sup> Hellenic Accreditation System S.A. (ESYD)	Greece	40 Testing ISO/IEC 17025 & ISO 15189 Calibration ISO/IEC 17025	22 May 2004 22 May 2004
34	National Accreditation Board for Testing and Calibration Laboratories (NABL)	India	43 Testing ISO/IEC 17025 & ISO 15189 Calibration ISO/IEC 17025	02 Nov 2000 02 Nov 2000
35	National Accreditation Board for Certification Bodies (NABCB)	India	43 Inspection ISO/IEC 17020	16 Sept 2013
36	National Accreditation Body of Indonesia (KAN)	Indonesia	44 Testing ISO/IEC 17025 Testing ISO 15189 Calibration ISO/IEC 17025	20 June 2001 14 Mar 2013 30 Dec 2003



Pipettes, Graduated, Clear Glass, Short - Line, Graduated to Tip, DIN EN ISO 835  
Amber Stain Graduation, (Serological 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
10001 33	1	0.01	0.010	360	12	150.00
10001 35	1	0.10	0.010	360	12	139.00
10001 41	2	0.02	0.015	360	12	165.00
10001 42	2	0.10	0.015	360	12	156.00
10001 53	5	0.05	0.045	360	12	184.00
10001 54	5	0.10	0.045	360	12	175.00
10001 60	10	0.10	0.075	360	12	190.00
10001 70	25	0.10	0.150	450	6	295.00



Precision Graduated Pipettes, Clear Glass, Short-Line, Graduated to Tip, DIN EN ISO 835  
Amber Stain Graduation, (Serological 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
10001 29	0.5	0.010	0.0075	360	12	381.00



Pipettes, Graduated, Clear Glass, Main Point Ring Graduation, Graduated to Tip, DIN EN ISO 835  
Amber Stain Graduation, (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
11001 33	1	0.01	0.007	360	12	461.00
11001 35	1	0.10	0.007	360	12	425.00
11001 41	2	0.02	0.010	360	12	481.00
11001 42	2	0.10	0.010	360	12	444.00
11001 53	5	0.05	0.030	360	12	564.00
11001 54	5	0.10	0.030	360	12	524.00
11001 60	10	0.10	0.050	360	12	601.00
11001 70	25	0.10	0.100	450	6	704.00



Pipettes, Graduated, Clear Glass, Main Point Blue Ring Graduation, Graduated to Tip, DIN EN ISO 835  
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	507.00
11101 41	2	0.02	0.010	360	12	530.00
11101 53	5	0.05	0.030	360	12	620.00
11101 54	5	0.10	0.030	360	12	573.00
11101 60	10	0.10	0.050	360	12	659.00
11101 70	25	0.10	0.100	450	6	776.00





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

DIN EN ISO 835

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	150.00
10002 35	1	0.10	0.010	360	12	139.00
10002 41	2	0.02	0.015	360	12	165.00
10002 42	2	0.10	0.015	360	12	156.00
10002 53	5	0.05	0.045	360	12	184.00
10002 54	5	0.10	0.045	360	12	175.00
10002 60	10	0.10	0.075	360	12	190.00
10002 70	25	0.10	0.150	450	6	295.00



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

DIN EN ISO 835

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	461.00
11002 35	1	0.10	0.007	360	12	425.00
11002 41	2	0.02	0.010	360	12	481.00
11002 42	2	0.10	0.010	360	12	444.00
11002 53	5	0.05	0.030	360	12	564.00
11002 54	5	0.10	0.030	360	12	524.00
11002 60	10	0.10	0.050	360	12	601.00
11002 70	25	0.10	0.100	450	6	704.00



Pipette, Transfer, Volumetric, Accuracy as per Class 'A', Made from Heat Resistant, Low Expansion Borosilicate Glass, with Individual Certificate of Performance, RIVIERA

IS 1117: 1975

Cat No.	Capacity ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72710 33	1	0.007	25	318.00
72710 40	2	0.010	25	342.00
72710 55	5	0.015	25	363.00
72710 60	10	0.020	25	426.00
72710 65	20	0.030	25	554.00
72710 70	25	0.030	25	593.00
72710 75	50	0.050	12	664.00
72710 80	100	0.080	6	1012.00





Pipettes, Volumetric, Clear Glass, One Mark, **Blue** Inscription, Class 'AS',  
Conformity Certified with Batch Certificate, DWK

DIN EN ISO 835

Cat No.	Capacity ml	Tolerance $\pm$ ml	Total Length $\pm$ 10mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
23339 0105	1	0.008	325	12	342.00
23339 0208	2	0.010	350	12	351.00
23339 0302	3	0.010	350	6	391.00
23339 0405	4	0.015	410	6	417.00
23339 0508	5	0.015	410	6	420.00
23339 0602	6	0.015	410	6	721.00
23339 0705	7	0.015	410	6	721.00
23339 0808	8	0.020	450	6	880.00
23339 0902	9	0.020	450	6	880.00
23339 1007	10	0.020	450	6	475.00
23339 1504	15	0.030	520	6	608.00
23339 2003	20	0.030	520	6	614.00
23339 2509	25	0.030	530	6	659.00
23339 5009	50	0.050	550	6	799.00



Pipettes, Volumetric, Clear Glass, One Mark, Amber Stain Graduation, Class 'AS',  
Conformity Certified with Batch Certificate, EM-TECHCOLOR Brand

DIN EN ISO 648

Cat No.	Capacity ml	Tolerance $\pm$ ml	Total Length $\pm$ 10mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
13401 33	1	0.008	325	12	342.00
13401 40	2	0.010	350	12	351.00
13401 48	3	0.010	350	6	391.00
13401 50	4	0.015	410	6	417.00
13401 55	5	0.015	410	6	420.00
13401 56	6	0.015	410	6	721.00
13401 57	7	0.015	410	6	721.00
13401 58	8	0.020	450	6	880.00
13401 59	9	0.020	450	6	880.00
13401 60	10	0.020	450	6	475.00
13401 64	15	0.030	520	6	608.00
13401 65	20	0.030	520	6	614.00
13401 70	25	0.030	530	6	659.00
13401 75	50	0.050	550	6	799.00



Pipettes, Volumetric, Clear Glass, Two Marks, Amber Stain Graduation, Class 'AS',  
Conformity Certified with Batch Certificate, EM-TECHCOLOR Brand

DIN EN ISO 648

Cat No.	Capacity ml	Tolerance $\pm$ ml	Total Length $\pm$ 10mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
13402 33	1	0.008	325	12	594.00
13402 40	2	0.010	350	12	835.00
13402 48	3	0.010	350	6	858.00
13402 55	5	0.015	410	6	935.00
13402 60	10	0.020	450	6	1015.00
13402 64	15	0.030	520	6	1277.00
13402 65	20	0.030	520	6	1308.00
13402 70	25	0.030	530	6	1308.00
13402 75	50	0.050	550	6	1668.00



Pipettes, Transfer, Volumetric, Accuracy as per Class 'B',  
Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA

IS 1117 : 1975

Cat No.	Capacity ml	Tolerance $\pm$ ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72700 33	1	0.015	25	138.00
72700 40	2	0.020	25	138.00
72700 55	5	0.030	25	144.00
72700 60	10	0.040	25	173.00
72700 65	20	0.060	25	206.00
72700 70	25	0.060	25	215.00
72700 75	50	0.100	12	254.00
72700 80	100	0.160	6	388.00



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	80.00
23175 145	16 x 100	18	1	100	88.00
23175 215	16 x 160	18	1	100	104.00
23175 235	18 x 180	18	1	100	134.00

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	46.00
71300 105	10	16 x 125	100	56.00
71300 305	30	25 x 100	100	76.00
71300 605	60	25 x 200	100	81.00



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	99.00
71310 105	10	16 x 125	100	135.00
71310 305	30	25 x 100	100	147.00
71310 605	60	25 x 200	100	189.00





**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	45.00
71200 155	15	25 x 57	100	55.00
71200 305	30	25 x 95	100	76.00



**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	102.00
71210 155	15	25 x 57	100	139.00
71210 305	30	25 x 95	100	173.00



**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	14.00
71220 025	25	100	15.00



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

Cat No.	Capacity ml	Dia mm	Total Length $\pm 5$ mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72800 15	15	19	120	100	54.00
72800 50	50	33	150	100	149.00



**Tubes, Centrifuge, Conical, Ungraduated**

Cat No.	Capacity ml	Dia mm	Total Length $\pm 5$ mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
60001 01	15	17	112	100	67.00

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	132.00
72810 50	50	33	150	100	275.00



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

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	168.00



**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	8.25
71100 002	12 x 75	100	8.85
71100 003	12 x 100	100	11.40
71100 004	15 x 125	100	14.90
71100 005	15 x 150	100	17.25
71100 006	18 x 150	100	18.65
71100 007	25 x 100	50	24.00
71100 008	25 x 150	50	28.65
71100 009	25 x 200	50	37.55
71100 010	32 x 200	25	58.00
71100 011	38 x 200	25	70.00



**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	8.25
71110 002	12 x 75	100	8.85
71110 003	12 x 100	100	11.40
71110 004	15 x 125	100	14.90
71110 005	15 x 150	100	17.25
71110 006	18 x 150	100	18.65
71110 007	25 x 100	50	24.00
71110 008	25 x 150	50	28.65
71110 009	25 x 200	50	37.55
71110 010	32 x 200	25	58.00
71110 011	38 x 200	25	70.00



**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	6.50
23277 002	12 x 75	100	7.00
23277 003	12 x 100	100	9.00



**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	6.50
23278 002	12 x 75	100	7.00
23278 003	12 x 100	100	9.00

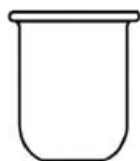




**KETTLES** offered below are designed for organic reactions of viscous liquids. Covers are provided with openings containing interchangeable joints for quick assembly with condensers and stirrers.

**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	11916.00
74600 10	1000	108	178	1	12460.00
74600 20	2000	140	190	1	15352.00
74600 40	4000	140	343	1	18611.00



**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	5364.00
74610 10	1000	1	6045.00
74610 20	2000	1	8080.00
74610 40	4000	1	12147.00



**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	8988.00
74620 10	1000	1	8988.00
74620 20	2000	1	10564.00
74620 40	4000	1	10564.00

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	2149.00
40009 02	2000	205	1	2936.00
40009 05	5000	260	1	6660.00
40009 10	10000	320	1	13914.00
40009 20	20000	400	1	24376.00



**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	3746.00
74700 2111	19/26	14/23	14/23	14/23	29/32	1	3746.00
74700 4111	29/32	14/23	14/23	14/23	29/32	1	3746.00



### Watch Glass Dishes, RIVIERA

Cat No.	O. D. mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
71900 41	80	10	82.00
71900 46	100	10	95.00
71900 52	125	10	111.00
71900 57	150	10	143.00



### 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	1457.00
21755 43	80 x 20	74 x 22	10	1650.00
21755 46	100 x 15	94 x 17	10	2134.00
21755 53	150 x 30	143 x 32	10	4462.00



### Plastic Clamps for Joint Fittings

Cat No.	Joint Size	Qty. Per Pack Pcs	Maximum Price Rs/Pc
77600 14	B 14	10	57.00
77600 19	B 19	10	59.00
77600 24	B 24	10	61.00
77600 29	B 29	10	67.00






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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	424.00
204020 36	250	B 19	4	424.00
204030 36	250	B 24	4	424.00
204040 36	250	B 29	4	424.00
204050 36	250	B 34	4	501.00
204010 44	500	B 14	4	561.00
204020 44	500	B 19	4	561.00
204030 44	500	B 24	4	561.00
204040 44	500	B 29	4	561.00
204050 44	500	B 34	4	674.00
204020 54	1000	B 19	2	747.00
204030 54	1000	B 24	2	747.00
204040 54	1000	B 29	2	747.00
204050 54	1000	B 34	2	895.00
204070 54	1000	B 45	2	976.00
204090 54	1000	B 55	2	976.00
204030 64	2000	B 24	2	1863.00
204040 64	2000	B 29	2	1863.00
204050 64	2000	B 34	2	1863.00
204070 64	2000	B 45	2	2081.00
204030 68	3000	B 24	1	4060.00
204040 68	3000	B 29	1	4060.00
204050 68	3000	B 34	1	4060.00
204070 68	3000	B 45	1	4389.00
204090 68	3000	B 55	1	4389.00
204030 73	5000	B 24	1	6032.00
204040 73	5000	B 29	1	6032.00
204050 73	5000	B 34	1	6032.00
204070 73	5000	B 45	1	6032.00
204090 73	5000	B 55	1	6032.00

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	432.00
206020 36	250	B 19	4	432.00
206030 36	250	B 24	4	432.00
206040 36	250	B 29	4	432.00
206050 36	250	B 34	4	432.00
206010 44	500	B 14	4	477.00
206020 44	500	B 19	4	477.00
206030 44	500	B 24	4	477.00
206040 44	500	B 29	4	477.00
206050 44	500	B 34	4	477.00
206020 54	1000	B 19	2	634.00
206030 54	1000	B 24	2	634.00
206040 54	1000	B 29	2	634.00
206050 54	1000	B 34	2	634.00
206070 54	1000	B 45	2	803.00
206090 54	1000	B 55	2	803.00
206030 64	2000	B 24	2	1539.00
206040 64	2000	B 29	2	1539.00
206050 64	2000	B 34	2	1539.00
206070 64	2000	B 45	2	1730.00
206030 68	3000	B 24	1	4389.00
206040 68	3000	B 29	1	4389.00
206050 68	3000	B 34	1	4389.00
206070 68	3000	B 45	1	4859.00
206090 68	3000	B 55	1	4859.00
206030 73	5000	B 24	1	6636.00
206040 73	5000	B 29	1	6636.00
206050 73	5000	B 34	1	6636.00
206070 73	5000	B 45	1	6636.00
206090 73	5000	B 55	1	6636.00
206050 86	10000	B 34	1	9748.00
206070 86	10000	B 45	1	9748.00
206090 86	10000	B 55	1	9748.00
206090 91	20000	B 55	1	15997.00

**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	745.00
306032 36	250	B 24	B 19	4	745.00
306031 44	500	B 24	B 14	4	863.00
306032 44	500	B 24	B 19	4	863.00
306031 54	1000	B 24	B 14	2	1083.00
306032 54	1000	B 24	B 19	2	1083.00
306031 64	2000	B 24	B 14	2	2173.00
306032 64	2000	B 24	B 19	2	2173.00
306052 64	2000	B 34	B 19	2	2173.00
306032 68	3000	B 24	B 19	1	5265.00
306052 68	3000	B 34	B 19	1	5265.00
306053 68	3000	B 34	B 24	1	5388.00
306052 73	5000	B 34	B 19	1	7583.00
306053 73	5000	B 34	B 24	1	7583.00
306063 73	5000	B 40	B 24	1	7827.00
306052 86	10000	B 34	B 19	1	11241.00
306053 86	10000	B 34	B 24	1	11241.00
306073 86	10000	B 45	B 24	1	11241.00
306074 86	10000	B 45	B 29	1	11241.00
306075 86	10000	B 45	B 34	1	11241.00
306095 86	10000	B 55	B 34	1	11241.00
306097 86	10000	B 55	B 45	1	11241.00
306095 91	20000	B 55	B 34	1	17804.00
306097 91	20000	B 55	B 45	1	17804.00

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	745.00
406032 36	250	B 24	B 19	4	745.00
406031 44	500	B 24	B 14	4	863.00
406032 44	500	B 24	B 19	4	863.00
406031 54	1000	B 24	B 14	2	1083.00
406032 54	1000	B 24	B 19	2	1083.00
406031 64	2000	B 24	B 14	2	2173.00
406032 64	2000	B 24	B 19	2	2173.00
406052 64	2000	B 34	B 19	2	2173.00
406032 68	3000	B 24	B 19	1	5265.00
406052 68	3000	B 34	B 19	1	5265.00
406053 68	3000	B 34	B 24	1	5388.00
406052 73	5000	B 34	B 19	1	7583.00
406053 73	5000	B 34	B 24	1	7583.00
406063 73	5000	B 40	B 24	1	7827.00
406052 86	10000	B 34	B 19	1	11241.00
406053 86	10000	B 34	B 24	1	11241.00
406073 86	10000	B 45	B 24	1	11241.00
406074 86	10000	B 45	B 29	1	11241.00
406075 86	10000	B 45	B 34	1	11241.00
406095 86	10000	B 55	B 34	1	11241.00
406097 86	10000	B 55	B 45	1	11241.00
406095 91	20000	B 55	B 34	1	17804.00
406097 91	20000	B 55	B 45	1	17804.00

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**

<b>Cat No.</b>	<b>Capacity ml</b>	<b>Centre Joint Size</b>	<b>Side Joint Size</b>	<b>Qty. Per Pack Pcs</b>	<b>Maximum Price Rs/Pc</b>
306121 36	250	B 19	B 14	4	1074.00
306222 36	250	B 19	B 19	4	1074.00
306131 36	250	B 24	B 14	4	1074.00
306232 36	250	B 24	B 19	4	1074.00
306141 36	250	B 29	B 14	4	1074.00
306242 36	250	B 29	B 19	4	1074.00
306121 44	500	B 19	B 14	4	1396.00
306222 44	500	B 19	B 19	4	1396.00
306131 44	500	B 24	B 14	4	1396.00
306232 44	500	B 24	B 19	4	1396.00
306141 44	500	B 29	B 14	4	1396.00
306242 44	500	B 29	B 19	4	1396.00
306131 54	1000	B 24	B 14	2	1534.00
306232 54	1000	B 24	B 19	2	1534.00
306333 54	1000	B 24	B 24	2	1534.00
306242 54	1000	B 29	B 19	2	1534.00
306252 54	1000	B 34	B 19	2	1534.00
306353 54	1000	B 34	B 24	2	1534.00
306131 64	2000	B 24	B 14	2	2929.00
306232 64	2000	B 24	B 19	2	2929.00
306242 64	2000	B 29	B 19	2	2929.00
306252 64	2000	B 34	B 19	2	2929.00
306353 64	2000	B 34	B 24	2	2929.00
306363 64	2000	B 40	B 24	2	2929.00
306232 68	3000	B 24	B 19	1	6526.00
306252 68	3000	B 34	B 19	1	6815.00
306353 68	3000	B 34	B 24	1	6815.00
306363 68	3000	B 40	B 24	1	6815.00
306252 73	5000	B 34	B 19	1	8822.00
306555 73	5000	B 34	B 34	1	8822.00
306363 73	5000	B 40	B 24	1	8822.00
306383 73	5000	B 50	B 24	1	8988.00
306252 86	10000	B 34	B 19	1	15541.00
306353 86	10000	B 34	B 24	1	15541.00
306373 86	10000	B 45	B 24	1	15541.00
306474 86	10000	B 45	B 29	1	15541.00
306575 86	10000	B 45	B 34	1	15541.00
306595 86	10000	B 55	B 34	1	15541.00
306797 86	10000	B 55	B 45	1	15541.00
306595 91	20000	B 55	B 34	1	22081.00
306797 91	20000	B 55	B 45	1	22081.00

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**

<b>Cat No.</b>	<b>Capacity ml</b>	<b>Centre Joint Size</b>	<b>Side Joint Size</b>	<b>Qty. Per Pack Pcs</b>	<b>Maximum Price Rs/Pc</b>
406121 36	250	B 19	B 14	4	1074.00
406222 36	250	B 19	B 19	4	1074.00
406131 36	250	B 24	B 14	4	1074.00
406232 36	250	B 24	B 19	4	1074.00
406141 36	250	B 29	B 14	4	1074.00
406242 36	250	B 29	B 19	4	1074.00
406121 44	500	B 19	B 14	4	1396.00
406222 44	500	B 19	B 19	4	1396.00
406131 44	500	B 24	B 14	4	1396.00
406232 44	500	B 24	B 19	4	1396.00
406141 44	500	B 29	B 14	4	1396.00
406242 44	500	B 29	B 19	4	1396.00
406131 54	1000	B 24	B 14	2	1534.00
406232 54	1000	B 24	B 19	2	1534.00
406333 54	1000	B 24	B 24	2	1534.00
406141 54	1000	B 29	B 14	2	1534.00
406242 54	1000	B 29	B 19	2	1534.00
406252 54	1000	B 34	B 19	2	1534.00
406353 54	1000	B 34	B 24	2	1534.00
406272 54	1000	B 45	B 19	2	1648.00
406373 54	1000	B 45	B 24	2	1648.00
406131 64	2000	B 24	B 14	2	2929.00
406232 64	2000	B 24	B 19	2	2929.00
406333 64	2000	B 24	B 24	2	2929.00
406141 64	2000	B 29	B 14	2	2929.00
406242 64	2000	B 29	B 19	2	2929.00
406252 64	2000	B 34	B 19	2	2929.00
406353 64	2000	B 34	B 24	2	2929.00
406363 64	2000	B 40	B 24	2	3144.00
406272 64	2000	B 45	B 19	2	3144.00
406373 64	2000	B 45	B 24	2	3144.00
406232 68	3000	B 24	B 19	1	6815.00
406252 68	3000	B 34	B 19	1	6815.00
406353 68	3000	B 34	B 24	1	6815.00
406363 68	3000	B 40	B 24	1	6815.00
406272 68	3000	B 45	B 19	1	7170.00
406373 68	3000	B 45	B 24	1	7170.00
406252 73	5000	B 34	B 19	1	8822.00
406353 73	5000	B 34	B 24	1	8822.00
406555 73	5000	B 34	B 34	1	8822.00
406363 73	5000	B 40	B 24	1	8822.00
406272 73	5000	B 45	B 19	1	8988.00
406373 73	5000	B 45	B 24	1	8988.00
406383 73	5000	B 50	B 24	1	8988.00
406252 86	10000	B 34	B 19	1	15541.00
406353 86	10000	B 34	B 24	1	15541.00
406373 86	10000	B 45	B 24	1	15541.00
406474 86	10000	B 45	B 29	1	15541.00
406575 86	10000	B 45	B 34	1	15541.00
406595 86	10000	B 55	B 34	1	15541.00
406797 86	10000	B 55	B 45	1	15541.00
406595 91	20000	B 55	B 34	1	22081.00
406797 91	20000	B 55	B 45	1	22081.00

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	1780.00
306000 54	1000	All Sizes	All Sizes	2	1938.00
306000 64	2000	All Sizes	All Sizes	2	3629.00
306000 68	3000	All Sizes	All Sizes	1	8003.00
306000 73	5000	All Sizes	All Sizes	1	9483.00
306000 86	10000	All Sizes	All Sizes	1	17445.00
306000 91	20000	All Sizes	All Sizes	1	22793.00

**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	1780.00
406000 54	1000	All Sizes	All Sizes	2	1938.00
406000 64	2000	All Sizes	All Sizes	2	3629.00
406000 68	3000	All Sizes	All Sizes	1	8003.00
406000 73	5000	All Sizes	All Sizes	1	9483.00
406000 86	10000	All Sizes	All Sizes	1	17445.00
406000 91	20000	All Sizes	All Sizes	1	22793.00

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

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



## SILICA WARE



### CHEMICAL PROPERTIES

Fused Silica is neutral to all halogens and acids irrespective of temperature or concentration except hydro-fluoric and phosphoric acid. Phosphoric acid affects fused silica only at high temperatures and can be concentrated successfully in silica vessels. For all ordinary purposes they can be used with phosphoric acid. Sulphuric, Nitric and Hydrochloric acids or any mixture of these acids, do not affect Fused Silica even at temperatures upto 1000°C.

Strong alkalis react with fused silica. Cleaning of Silica ware regularly can ensure good service. Salts and basic oxides react at elevated temperatures, particularly above their melting point. The extent of reaction is largely determined by the thermal diffusion of impurities into the fused silica. Alkali metals have the highest diffusivity and are the most damaging.

### THERMAL PROPERTIES - THERMAL EXPANSION

Mean value of the coefficient of thermal expansion between 0 and 800°C -  $5.5 \times 10^{-7}/^{\circ}\text{C}$ .

Fused silica is neutral to abrupt temperature changes. Vitreous silica is highly viscous. Viscosity drops uniformly as the temperature rises over softening point.

Average Co-efficient expansion 0° to 800°C		5.5 x 10 <sup>-7</sup> /°C
<b>Thermal Conductivity</b>	<b>Temp</b>	<b>CAI</b>
	20°C	cm <sup>-1</sup> Sec <sup>-1</sup> °C <sup>-1</sup>
		36 X 10 <sup>-4</sup>
	100°C	38 X 10 <sup>-4</sup>
	250°C	41 X 10 <sup>-4</sup>
	500°C	50 X 10 <sup>-4</sup>
	800°C	57 X 10 <sup>-4</sup>
	1000°C	65 X 10 <sup>-4</sup>
<b>Specific heat</b>	<b>Temp°C</b>	<b>Cal/g</b>
	0	0.166
	100	0.200
	500	0.275
	1000	0.290
<b>Softening temp.</b>	1700°C	
<b>Annealing temp.</b>	1150°C	
<b>Working temp.</b>	1900°C to 2000°C	
<b>Operating temp. (Continuous)</b>	1050°C	
<b>Operating temp. (intermittent)</b>	1350°C	



Silica Basin with Spout, Round Form, RIVIERA

Cat No.	Nominal Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78500 03	20	55	23	10	530.00
78500 06	45	75	27	10	760.00
78500 09	70	87	33	10	975.00
78500 12	85	94	36	10	1395.00
78500 15	100	100	45	10	1600.00
78500 18	200	113	47	10	2405.00
78500 24	400	142	63	10	4265.00



**Silica Basin with Spout, Deep Form, RIVIERA**



Cat No.	Nominal Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78501 03	10	40	18	10	1575.00
78501 06	15	50	25	10	1755.00
78501 09	45	60	30	10	1960.00
78501 12	90	80	45	10	2165.00
78501 15	170	100	55	10	2915.00

**Silica Basin with Spout, Flat Form, RIVIERA**



Cat No.	Nominal Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78502 03	20	69	15	10	1220.00
78502 06	25	79	15	10	1510.00
78502 09	75	101	20	10	1785.00
78502 12	125	131	23	10	2380.00

**Silica Capsules Circular, RIVIERA**



Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78503 03	10	40	15	10	530.00
78503 06	20	48	15	10	610.00
78503 09	25	54	15	10	780.00

**Silica Crucible without Lid, Low Form, RIVIERA**



Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78504 03	15	41	25	10	250.00
78504 06	25	47	28	10	265.00
78504 09	50	57	37	10	530.00
78504 12	80	67	45	10	990.00
78504 15	100	70	48	10	1400.00
78504 18	150	82	51	10	1755.00

**Silica Lid, Low Form, RIVIERA**



Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78505 03	15	10	235.00
78505 06	25	10	255.00
78505 09	50	10	380.00
78505 12	80	10	745.00
78505 15	100	10	940.00
78505 18	150	10	1545.00


**Silica Crucible without Lid, Tall Form, RIVIERA**

Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78506 03	20	35	38	10	605.00
78506 06	30	43	39	10	705.00
78506 09	50	51	51	10	995.00
78506 12	200	73	81	10	2080.00


**Silica Crucible Lid, Tall Form, RIVIERA**

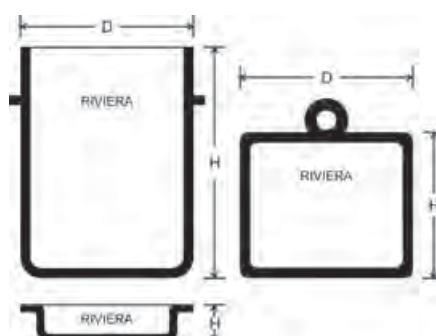
Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78507 03	20	Suit To Crucible	Suit To Crucible	10	465.00
78507 06	30	Suit To Crucible	Suit To Crucible	10	480.00
78507 09	50	Suit To Crucible	Suit To Crucible	10	605.00
78507 12	200	Suit To Crucible	Suit To Crucible	10	1400.00


**Silica Moisture Dish with Lid, RIVIERA**

Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78508 03	8	38	11	10	1375.00
78508 06	20	54	12	10	1715.00
78508 09	35	75	12	10	2505.00

**Silica Volatile Matter Crucible with Lid, RIVIERA**

Cat No.	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78509 03	25	38	10	1045.00
<b>Spares</b>				
78509 06	Only Lid		10	250.00
78509 09	Only Plunger		10	400.00







## QUARTZ WARE

Vitreous Silica is the glassing modification of silcondioxide with a purity of 99.9% in the transparent form and is called fused silica. All our silica ware products are made out of fused silica.

Fused silica is completely unaffected by acids such as sulphuric, nitric and hydrochloric, however, it can be affected by hydrofluoric acid and at high temperatures also by phosphoric acid. Hot alkalies and certain metallic oxides also react on fused silica.

### Fused silica is boron free

They are of very low expansion and hence have excellent dimensional stability and thermal shock resistance.

Electrical resistivity (at 350°C)	7 x 10 <sup>7</sup> ohm cm
Average co-efficient of expansion	5.5 x 10 <sup>-7</sup> / °C
Softening point	1685° C
Annealing point	1200° C
Operating temperature (continuous)	1050° C
Operating temperature (intermittent)	1350° C
Working temperature	1950° C
Strain point	1120° C

### Quartz Basin with Spout, Round Form, RIVIERA

Cat No.	Nominal Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78406 03	20	55	23	10	980.00
78406 06	45	75	27	10	1285.00
78406 09	70	87	33	10	1915.00
78406 12	85	94	36	10	3565.00
78406 15	100	100	39	5	4990.00
78406 18	200	113	47	5	8015.00



### Quartz Capsules Circular, RIVIERA

Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78407 03	10	40	15	10	490.00
78407 06	20	48	15	10	670.00
78407 09	25	54	15	10	1000.00




**Triangles on Nickel Chrome wire, Quartz, RIVIERA**

Cat No.	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78409 03	24	10	270.00
78409 06	28	10	315.00
78409 09	32	10	355.00
78409 12	35	10	405.00
78409 15	38	10	715.00


**Quartz Crucible without Lid, Low Form, RIVIERA**

Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price
78401 03	15	41	25	10	490.00
78401 06	25	47	28	10	715.00
78401 09	50	57	37	10	1160.00
78401 12	80	67	45	10	1870.00
78401 15	100	70	48	10	2680.00
78401 18	150	82	54	10	3390.00


**Quartz Lid, Low Form, RIVIERA**

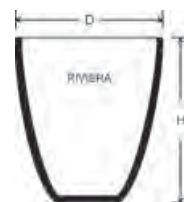
Cat No.	Capacity ml	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78402 03	15	10	490.00
78402 06	25	10	715.00
78402 09	50	10	1070.00
78402 12	80	10	1825.00
78402 15	100	10	2410.00
78402 18	150	10	2850.00


**Quartz Muffle Tray Rod Type, RIVIERA**

Cat No.	No. of Holes	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78408 02	2	10	1745.00
78408 06	4	10	3420.00



**Quartz Crucible without Lid, Tall Form, RIVIERA**



Cat No.	Capacity ml	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78403 06	30	39	43	10	1290.00
78403 09	50	51	51	10	1780.00
78403 12	200	73	81	10	4455.00

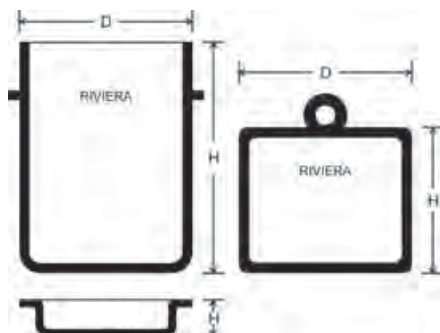
**Quartz Crucible Lid, Tall Form, RIVIERA**



Cat No.	Capacity ml	Diameter mm	Height mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78404 06	30	Suit To Crucible	Suit To Crucible	10	890.00
78404 09	50	Suit To Crucible	Suit To Crucible	10	1160.00
78404 12	200	Suit To Crucible	Suit To Crucible	10	2225.00

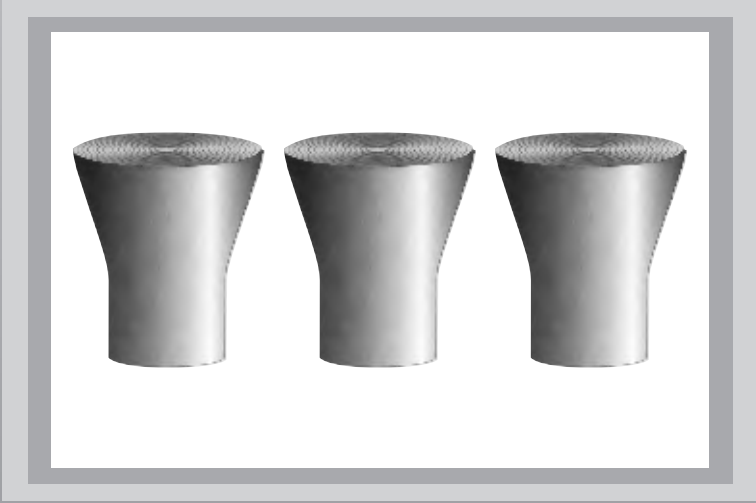
**Quartz Volatile Matter Crucible with Lid, RIVIERA**

Cat No.	Diameter (D) mm	Height (H) mm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
78405 03	25	38	10	1150.00
78405 06	Only Lid		10	315.00
78405 09	Only Plunger		10	405.00

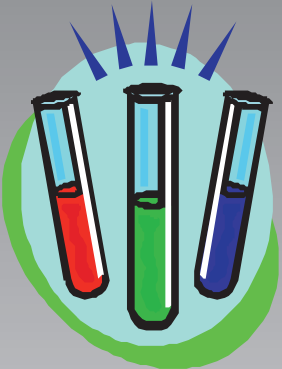




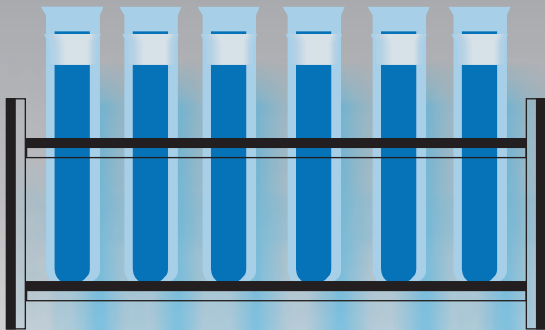
# Steristoppers®



**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**



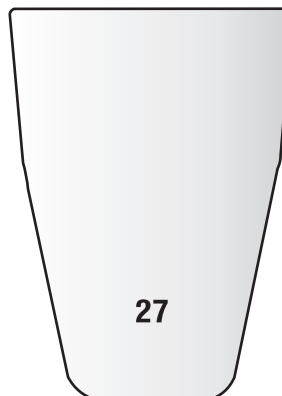
For test tube O.D. 25 mm  
I.D. 19.00 to 22.50 mm  
Cat. No. 2012001

**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	19.00
20114 50	14.5	Test Tube O. D. 18 mm	100	19.00
20120 01	20P	Test Tube O. D. 25 mm	100	23.00
20127 23	MA 2/3	Test Tube O. D. 32 mm	50	58.00
20127 00	27	Test Tube O. D. 38 mm Conical Flask 250 ml Conical Flask 500 ml	50	45.00
20136 00	36	Conical Flask 1000 ml	50	74.00
20145 01	45P	Conical Flask 2, 3, & 5 Ltr. Solution Bottle 10 & 20 Ltr.	30	164.00



## 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.

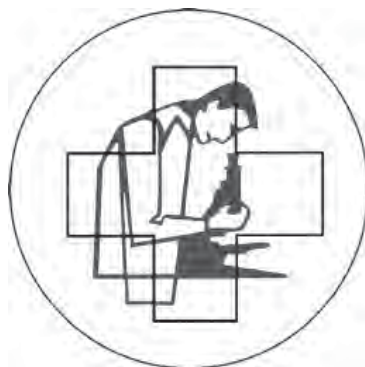
The Microscope Slides are manufactured on special purpose, precision, high speed glass cutting machines which ensure excellent dimensional control and edges are free from any defects. The cut edges are then ground to a uniform consistency to make the slides absolutely safe in handling. Besides ground 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/Package
72900 135	75 x 25	1.00	50	10	95.00

### 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/Package
72910 135	75 x 25	1.00	50	10	136.00





**Distillation Unit, All Glass, with Quartz Heater, 'O' Ring Type Condenser Fixing arrangement, without Auto Cut-off, Horizontal Type, Made from Heat Resistant, Low Expansion Borosilicate Glass, RIVIERA**

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72200 15	Single	1.25	35	1.5	1.5 - 2.5	1	15390.00
72200 1515	Double	3.0	60	1.5	0.8 - 1.2	1	30780.00
72200 157	Condenser only for above unit						3220.00
72200 154	First Boiler for Single and Double Stage unit						7495.00
72200 155	Second Boiler only for Double Stage unit						7495.00
72200 156	Quartz Heater only for above unit						5360.00
72200 200	Auto cut-off system for single stage with sensor (Optional)						7675.00
72200 300	Auto cut-off system for double stage with sensor (Optional)						15360.00

**Distillation Unit, 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	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
722210 040	Single, w/o Auto Cut-off	3.0	60	4.0	1.5 - 2.5	1	25655.00
722210 045	Single, with Auto Cut-off	3.0	60	4.0	1.5 - 2.5	1	32625.00
722210 043	Condenser only for above unit						6435.00
722210 041	Boiler only for above unit						9650.00
722210 042	Metal Heater only for above unit						8580.00
72200 100	Auto cut-off system for single stage (Optional)						7675.00

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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
722211 040	Single, w/o Auto Cut-off	3.0	60	4.0	1.5 - 2.5	1	28190.00
722211 045	Single, with Auto Cut-off	3.0	60	4.0	1.5 - 2.5	1	35160.00
722210 043	Condenser only for above unit						6435.00
722211 0411	First Boiler for Single and Double Stage unit						9935.00
722211 0412	Second Boiler only for Double Stage unit						9935.00
722211 042	Ceramic Heater only for above unit						9935.00
72200 200	Auto cut-off system for single stage with sensor (Optional)						7675.00
722211 4040	Double, w/o Auto Cut-off	6.0	50 x 2 inputs	4.0	1.5 - 2.5	1	56380.00
72200 300	Auto cut-off system for double stage with sensor (Optional)						15360.00

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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72211 15	Single	1.25	35	1.5	1.5 - 2.5	1	32825.00
72201 157	Condenser only for above unit						3220.00
72201 1553	First Boiler for Single and Double stage unit						7495.00
72201 1554	Second Boiler only for Double Stage unit						7495.00
72201 156	Quartz Heater only for above unit						5360.00
72211 40	Single	3.0	50	4.0	1.5 - 2.5	1	45200.00
722210 043	Condenser only for above unit						6435.00
722210 0413	First Boiler for Single and Double stage unit						9650.00
722210 0414	Second Boiler only for Double Stage unit						9650.00
722210 0425	Ceramic Heater only for above unit						8580.00
72211 1515	Double	3.0	35 x 2 inputs	1.5	0.8 - 1.2	1	65640.00
72211 4040	Double	6.0	50 x 2 inputs	4.0	0.8 - 1.2	1	90400.00

**Note : The above quality of Distillate is obtained by using treated water as boiler feed & collecting the Distillate in closed quartz container.**



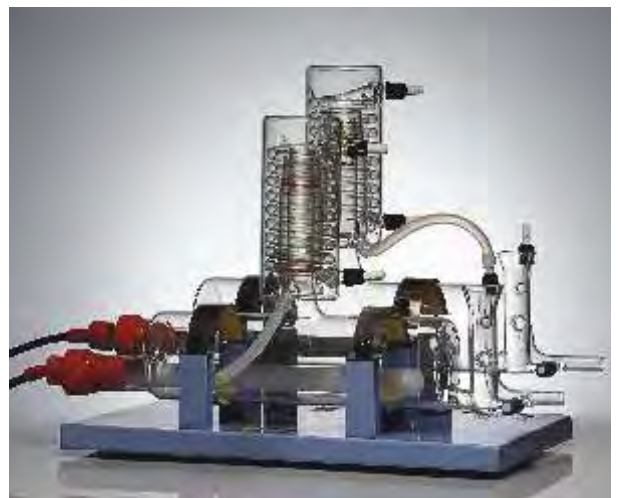
**Riviera** Water Distillation Units



Cat. No. 722210 040



Cat. No. 722211 040



Double Stage Distillation

**Riviera** Water Distillation Units



**Cat. No. 72240 Series**



**Cat. No. 72260 000**



**Cat. No. 72230 Series**



**Cat. No. 72211 Series**



**Cat. No. 72213 Series**



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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72212 15	Single	1.5	35	1.5	1.5 - 2.5	1	45200.00
72201 157	Condenser only for above unit						3220.00
72201 1555	Boiler only for above unit						7495.00
72201 1566	Quartz Heater only for above unit						5360.00
72212 40	Single	3.0	50	4.0	1.5 - 2.5	1	61250.00
722210 043	Condenser only for above unit						6435.00
722210 0415	Boiler only for above unit						9650.00
722210 0426	Ceramic Heater only for above unit						8580.00

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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72213 15	Double	3.0	35 x 2 inputs	1.5	0.8 - 1.2	1	91220.00
72201 157	Condenser only for above unit						3220.00
72201 1555	First Boiler for Single and Double Stage unit						7495.00
72201 1556	Second Boiler only for Double Stage unit						7495.00
72201 1566	Quartz Heater only for above unit						5360.00
72213 40	Double	6.0	50 x 2 inputs	4.0	0.8 - 1.2	1	127665.00
722210 043	Condenser only for above unit						6435.00
722210 0415	First Boiler for Single and Double Stage unit						9650.00
722210 0416	Second Boiler only for Double Stage unit						9650.00
722210 0426	Ceramic Heater only for above unit						8580.00

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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72220 10	Single	1.0	30	1.0	1.5 - 2.0	1	47160.00
72220 105	Boiler only for above unit						19305.00
72220 106	Condenser only for above unit						21420.00
72220 20	Single	1.5	40	2.0	1.5 - 2.0	1	53590.00
72220 205	Boiler only for above unit						25720.00
72220 206	Condenser only for above unit						25720.00
72220 30	Single	2.0	50	3.0	1.5 - 2.0	1	74930.00
72220 305	Boiler only for above unit						27855.00
72220 306	Condenser only for above unit						39650.00
72220 40	Single	3.0	60	4.0	1.5 - 2.0	1	91135.00
72220 405	Boiler only for above unit						35345.00
72220 406	Condenser only for above unit						58960.00
72220 50	Single	4.0	65	5.0	1.5 - 2.0	1	107190.00
72220 505	Boiler only for above unit						46425.00
72220 506	Condenser only for above unit						61775.00

**Note : The above quality of Distillate is obtained by using treated water as boiler feed & collecting the Distillate in closed quartz container.**



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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72230 010	Single	1.0	30	1.0	1.5 - 2.0	1	27690.00
72230 110	Boiler, Quartz only for above unit					1	19305.00
72230 210	Condenser, Borosilicate only for above unit					1	2675.00
72230 020	Single	1.5	40	2.0	1.5 - 2.0	1	30965.00
72230 120	Boiler, Quartz only for above unit					1	25720.00
72230 220	Condenser, Borosilicate only for above unit					1	2675.00
72230 030	Single	2.0	50	3.0	1.5 - 2.0	1	34450.00
72230 130	Boiler, Quartz only for above unit					1	27850.00
72230 230	Condenser, Borosilicate only for above unit					1	3220.00
72230 040	Single	3.0	60	4.0	1.5 - 2.0	1	46425.00
72230 140	Boiler, Quartz only for above unit					1	35345.00
72230 240	Condenser, Borosilicate only for above unit					1	4285.00
72230 050	Single	4.0	65	5.0	1.5 - 2.0	1	52135.00
72230 150	Boiler, Quartz only for above unit					1	46425.00
72230 250	Condenser, Borosilicate only for above unit					1	4285.00

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

Cat No.	Type	Power kW	Cooling Water Requirement Ltrs/Hr (Approx.)	Output Ltrs. / Hr	Conductivity $\mu$ s/cm	Qty. Per Pack Pcs	Maximum Price Rs/Pc
72240 010	Double	2.0	40	1.0	1.5 - 2.0	1	100985.00
72240 011	Lower Boiler, Quartz only for above unit					1	21440.00
72240 012	Upper Boiler with Condenser, Quartz only for above unit					1	77125.00
72240 015	Double	3.0	60	1.5	1.5 - 2.0	1	115650.00
72240 0151	Lower Boiler, Quartz only for above unit					1	26790.00
72240 0152	Upper Boiler with Condenser, Quartz only for above unit					1	96425.00
72240 020	Double	4.0	60	2.0	1.5 - 2.0	1	141715.00
72240 021	Lower Boiler, Quartz only for above unit					1	28910.00
72240 022	Upper Boiler with Condenser, Quartz only for above unit					1	104150.00
72240 025	Double	4.5	70	2.5	1.5 - 2.0	1	151480.00
72240 0251	Lower Boiler, Quartz only for above unit					1	32170.00
72240 0252	Upper Boiler with Condenser, Quartz only for above unit					1	115650.00
72240 030	Double	5.0	75	3.0	1.5 - 2.0	1	175920.00
72240 031	Lower Boiler, Quartz only for above unit					1	35345.00
72240 032	Upper Boiler with Condenser, Quartz only for above unit					1	127295.00
72240 040	Double	6.0	85	4.0	1.5 - 2.0	1	257210.00
72240 041	Lower Boiler, Quartz only for above unit					1	57865.00
72240 042	Upper Boiler with Condenser, Quartz only for above unit					1	208330.00
72240 050	Double	8.0	100	5.0	1.5 - 2.0	1	301345.00
72240 051	Lower Boiler, Quartz only for above unit					1	64305.00
72240 052	Upper Boiler with Condenser, Quartz only for above unit					1	231290.00

**Note : The above quality of Distillate is obtained by using treated water as boiler feed & collecting the Distillate in closed quartz container.**

**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 for single stage (Capacities 1 to 5 ltrs/hr) and also for double stage (Capacities upto 2.5 ltrs/hr only)	1	16280.00
72250 100	Auto Cut-Off System with Audio Alarm for double stage (Capacities 3 ltrs/hr and above only)	1	27690.00
72260 000	Water Softner for Boiler Feed	1	16280.00
72260 001	Resin for Water Softner	1	3790.00

**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 agressive 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	1	15230.00
	<b>Parts only</b>		
73200 504	Flask for all glass filter holder 47mm	1	4790.00
73200 502	Funnel for all glass filter holder 47mm	1	3600.00
73200 503	Filter base for all glass filter holder 47mm	1	5040.00
73200 501	Clamp	1	1795.00



**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 diaphragms available

- 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	13850.00
7001 0519	Moisture trap for above Pump						2320.00

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	13296.00
	<b>Parts only</b>		
73210 413	Flask for all glass filter holder 47mm	1	4287.00
73210 412	Funnel for all glass filter holder 47mm	1	3603.00
73210 414	Filter base for all glass filter holder 47mm complete with Neoprene Stopper	1	3603.00
73210 411	Clamp	1	1795.00
73210 415	Perforated Neoprene Stopper only	1	351.00

**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	7860.00
	<b>Parts only</b>		
73220 213	Flask for filter holder 25mm	1	1682.00
73220 212	Funnel for filter holder 25mm	1	1922.00
73220 214	Filter base for filter holder 25mm complete with Neoprene Stopper	1	2882.00
73220 211	Clamp	1	1381.00
73220 215	Perforated Neoprene Stopper only	1	351.00



## 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 0.22 $\mu$ m to 0.80  $\mu$ m.

#### 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  $\mu$ 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 $\mu$ m	Wetting Fluid	Bubble Point		Water Flow Rate ml/min/cm <sup>2</sup> at $\Delta$ P=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 $\mu$ m	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75400 4722	0.22	47	100	10	1574.00
75400 4745	0.45	47	100	10	1574.00
75400 4780	0.80	47	100	10	1574.00

### 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.

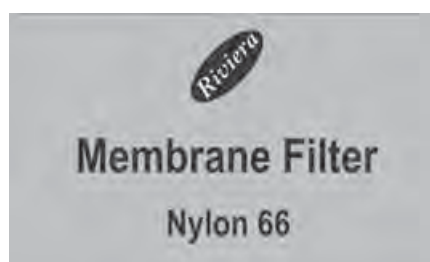
#### Features and Benefits :

- 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 $\mu$ m	Dia Base mm	No. of Sheets per Box	No. of Boxes per Case	Maximum Price Rs/Pc
75600 4722	0.22	47	100	10	2801.00
75600 4745	0.45	47	100	10	2801.00
75600 4780	0.80	47	100	10	2801.00





**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	2448.00
75500 4745	0.45	47	100	10	2448.00
75500 4780	0.80	47	100	10	2448.00

**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.

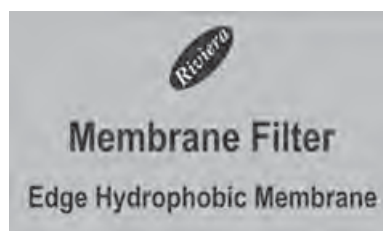
**Specifications :**

- 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	4901.00





## 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

# HIRSCHMANN®

**solarus®**  
advanced  
energy concept,  
precision results

solarus® sets standards as the world's first digital burette with an integrated solar cell. The power supply for the electronics and display is derived exclusively from an integrated solar cell. Batteries can be completely dispensed with.

Use of solarus® ensures that the term "sustainable" is related directly to work in the laboratory. The unique solar-powered digital burette is powered exclusively using photovoltaic. Power is supplied to the solarus® electronics via the solar cell at the rear. Charging and changing of batteries, excessive stand-by costs or returning the unit for replacement of lithium cells are therefore a thing of the past.

solarus® exploits instead the advantages of solar technology: comfortable, simple, environmentally friendly, inexhaustible and free. Use of superior-quality solar cells ensures a reliable power supply at all times, even where lighting conditions are restricted in the laboratory.

## **perfect ergonomics**

For efficient, non-fatiguing work

## **maintenance-friendly**

Easily replaceable valves

## **clear**

Large, clearly legible display

## **inspected**

Individual quality certificate,  
conformity certificate

## **accurate**

Manufacturer's calibration  
is permanently stored



## solarus® HiClass in digital titration

solarus® sets standards as the world's first digital burette with an integrated solar cell. The power supply for the electronics and display is derived exclusively from an integrated solar cell. Batteries can be completely dispensed with.

Easily replaceable valves, individual calibration with "Quick-Cal" and permanent storage of the manufacturer's calibration mean that solarus® can be adapted rapidly and flexibly. The vivid digital display prevents meniscus reading errors and is always clearly legible, regardless of the viewing angle. The handwheels with a soft touch surface are ergonomically optimised for particularly precise control.

solarus® is available in a 10 ml, 20 ml and 50 ml version. Thanks to its innovative technology, the solarus® 10 ml enables titration of the smallest volumes with an indicating range of 10 ÷ l to 99.99 ml in 10 ÷ l graduations. The ejection unit with a fine tip is supplied as a standard component.

### Solar technology

solarus® exploits the advantages of solar technology: comfortable, simple, environmentally friendly, inexhaustible and free. Use of superior-quality solar cells ensures a reliable power supply at all times, even where lighting conditions are restricted in the laboratory.



### The Hirschmann recirculation system

User, environmentally and budget friendly. The comfortable Hirschmann recirculation system facilitates rapid aeration without loss of reagent.



### Sensitive and precise

Handwheels with a soft touch surface for a firm hold enable sensitive titration via the precision and smooth-running gear mechanism.



### All-round rotation

solarus® can be freely screwed as desired onto the bottle. The advantage: the labels or labelled side of the bottle faces the user at all times. This means that you can keep an eye on everything.



### Always in sight

Clear, self-explanatory and user-friendly: the display is clearly legible at all times, regardless of the viewing angle, display 0.01 ml - 99.99 ml.

### Performance data

Titration graduations	10 ÷ l
Titration range	0.01 ml - 99.99 ml
Pistons	Teflon compound ECTFE, PTFE
Cylinders	Extremely inert and wear-free design made of calibrated DURAN® glass
Valves	Extremely inert and wear-free design, ball and seat made of borosilicate glass, valve springs made of Hastelloy. The valves can be easily removed and replaced using the fitting wrench (included in scope of delivery)
Plastic parts	All parts which come into contact with the medium are made of highly resistant fluoroplastics Valve block and valve housing made of ECTFE, FEP suction and ejection hose
Sterilisability	Media-conveying components (including ejection unit) are suitable for steam sterilisation at 121°C
Breakage resistance	Completely enclosed protective plastic jacket with clear inspection window protects against breakage
Test protocol	Each instrument is individually tested, certified and bears a unique instrument number

### Cat No.

939 20 10	solarus® 10 ml, R = 0.3%, CV = 0.1%
939 20 20	solarus® 20 ml, R = 0.2%, CV = 0.1%
939 20 50	solarus® 50 ml, R = 0.2%, CV = 0.1%

### Article designation

### Accessories

958 40 05	RS232 connection cable
931 30 27	Ejection unit, flexible, spiral shaped
956 40 10	liqui-soft® Software for data transfer



**Burette, Digital, Solar Powered, Conformity certified, with Individual Work Certificate, High Precision Digital Titrator for exact and error - free Titration, SOLARUS, make HIRSCHMANN.** 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 10	10	0.3	0.1	1	100477.00
93920 20	20	0.2	0.1	1	100477.00
93920 50	50	0.2	0.1	1	100477.00

**LABOPETTE, Fixed Volume, Conformity Certified with Individual Work Certificate, HIRSCHMANN**

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	18577.00
94755 02	10	1.2	0.8	1	18577.00
94755 03	20	1.0	0.5	1	18577.00
94755 04	25	1.0	0.5	1	18577.00
94755 05	50	1.0	0.4	1	18577.00
94755 06	100	0.8	0.3	1	18577.00
94755 07	200	0.8	0.3	1	18577.00
94755 08	250	0.8	0.3	1	18577.00
94755 09	500	0.8	0.3	1	18577.00
94755 10	1000	0.8	0.3	1	18577.00
94755 11	2000	0.8	0.3	1	18577.00
94755 12	5000	0.8	0.3	1	18577.00
94755 13	10 ml	0.6	0.3	1	18577.00

**LABOPETTE, Variable Volume, Conformity Certified with Individual Work Certificate, HIRSCHMANN**

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	25637.00
94754 01	0.5 - 10	0.01	1.2	0.8	1	25637.00
94754 06	2 - 20	0.02	1.0	0.5	1	25637.00
94754 07	10 - 100	0.1	0.8	0.3	1	25637.00
94754 08	20 - 200	0.2	0.8	0.3	1	25637.00
94754 09	100 - 1000	1.0	0.8	0.3	1	25637.00
94754 05	500 - 5000	10.0	0.8	0.3	1	25637.00
94754 04	1 - 10 ml	20.0	0.6	0.3	1	25637.00

**LABOPETTE, Variable Volume, Multi Channel, Conformity Certified with Individual Work Certificate, HIRSCHMANN**

Cat No.	No. of Channels	Volume $\mu$ l	Volume Division $\mu$ l	Accuracy R $\leq$ $\pm$ %	Reproducibility CV $\leq$ %	Qty. Per Pack Pcs	Maximum Price Rs/Pc
94756 01	8	0.5 - 10	0.01	2.4	1.6	1	107723.00
94756 02	8	10 - 100	0.1	1.6	0.6	1	107723.00
94756 04	8	30 - 300	0.2	1.6	0.6	1	107723.00
94757 01	12	0.5 - 10	0.01	2.4	1.6	1	128006.00
94757 02	12	10 - 100	0.1	1.6	0.6	1	128006.00
94757 04	12	30 - 300	0.2	1.6	0.6	1	128006.00

**PIPETUS - Pipetting Device for All Conventional Glass Pipettes, HIRSCHMANN**

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	15435.00
99030 00	Standard	Electrical	0.1 - 100	Elect. Pump	1	36760.00
99072 00	Akku	Electrical	0.1 - 100	Bat. Charger	1	43749.00



**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, make HIRSCHMANN.**

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	30990.00
93211 00	2	1	30990.00
93311 00	5	1	30990.00
93411 00	10	1	30990.00
93511 00	25	1	40270.00
93611 00	50	1	43684.00



**Bottle Top Liquid Dispenser, with Ceramic Piston, Variable Volume, Autoclavable at 121° C, 2 Bar, Conformity Certified, with Individual Number & Work Certificate, CERAMUS - CLASSIC, make HIRSCHMANN.**

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	31972.00
93200 00	0.4 - 2	1	31972.00
93300 00	1.0 - 5	1	31972.00
93400 00	2.0 - 10	1	31972.00
93500 00	5.0 - 30	1	41792.00
93600 00	10.0 - 60	1	45563.00

**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®, make HIRSCHMANN**

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	40597.00
93220 00	0.4 - 2	0.05	0.5	0.1	1	40597.00
93320 00	1 - 5	0.10	0.5	0.1	1	40597.00
93420 00	2 - 10	0.25	0.5	0.1	1	40597.00
93520 00	5 - 30	0.50	0.5	0.1	1	43987.00
93620 00	10 - 60	1.00	0.5	0.1	1	47110.00



**ceramus<sup>®</sup>**  
with unrivalled  
ceramic piston

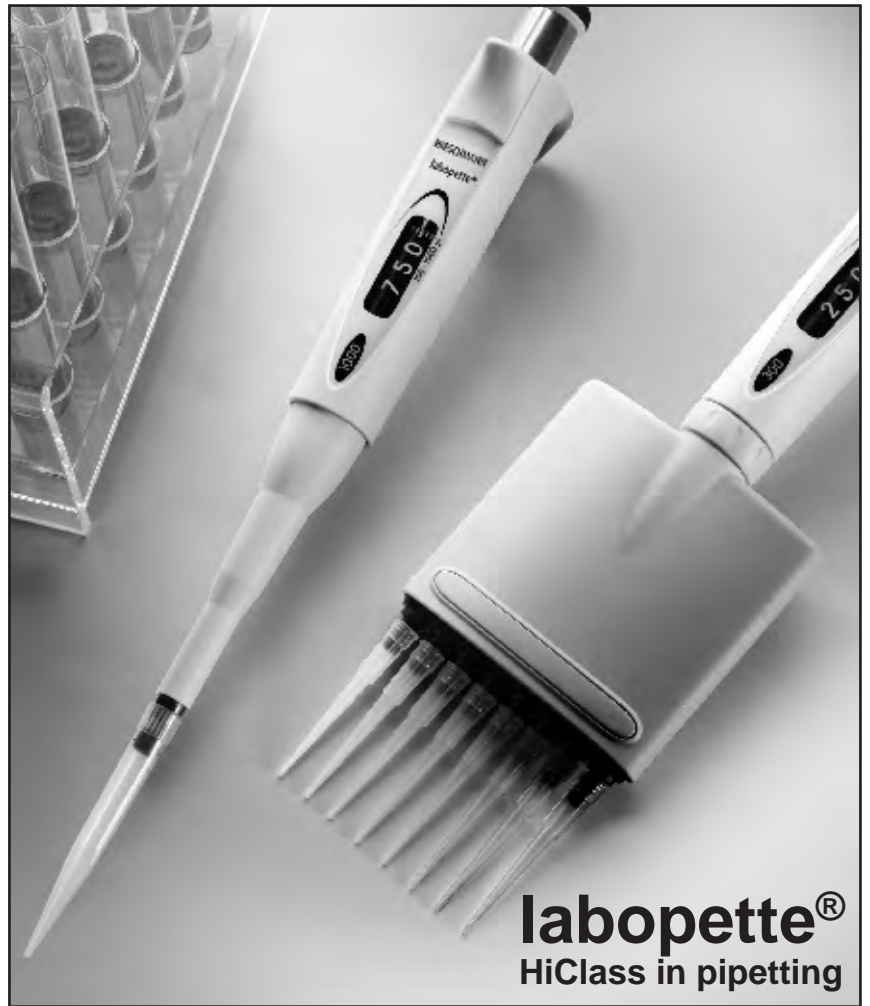


**ceramus<sup>®</sup> classic**  
dispensing as perfect  
as it could be





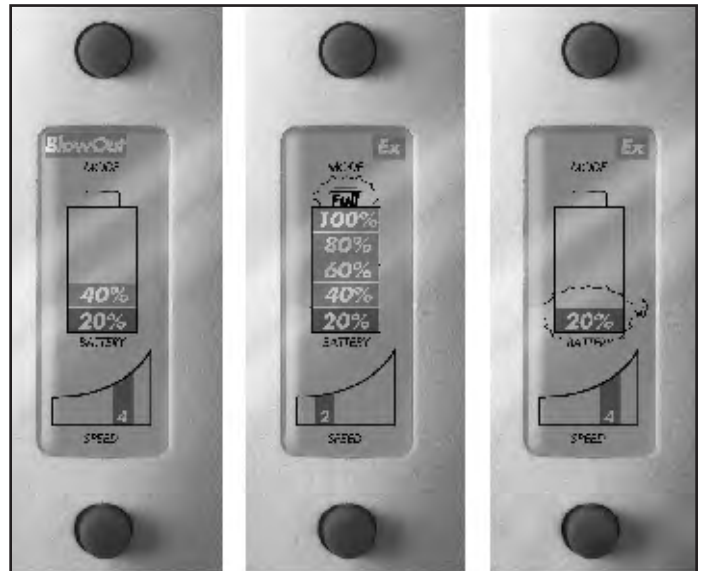
Pipette Stand



labopette®  
HiClass in pipetting



pipetus®  
HiClass in pipetting



pipetus® standard



pipetus® junior



**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	2205.00
77201 02	10	1	2205.00
77201 03	20	1	2205.00
77201 04	25	1	2205.00
77201 05	50	1	2205.00
77201 06	100	1	2205.00
77201 07	200	1	2205.00
77201 08	250	1	2205.00
77201 09	500	1	2205.00
77201 10	1000	1	2205.00
77201 11	2000	1	2880.00
77201 12	5000	1	2880.00
77201 13	10000	1	2880.00



**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	4035.00
77301 02	5 - 50	0.5	1	4035.00
77301 03	50 - 200	1.0	1	4035.00
77301 04	200 - 1000	5.0	1	4035.00
77301 05	10 - 100	0.5	1	4035.00
77301 06	100 - 1000	5.0	1	4035.00
77301 07	2 - 20	0.1	1	4035.00
77301 08	20 - 200	1.0	1	4035.00
77301 09	1000 - 5000	50.0	1	4715.00
77301 10	1000 - 10000	100.0	1	4715.00

**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	2000.00
77500 002	6	1	2375.00







**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	3430.00
77200 02	10	1	3430.00
77200 03	20	1	3430.00
77200 04	25	1	3430.00
77200 05	50	1	3430.00
77200 06	100	1	3430.00
77200 07	200	1	3430.00
77200 08	250	1	3430.00
77200 09	500	1	3430.00
77200 10	1000	1	3430.00
77200 11	2000	1	4105.00
77200 12	5000	1	4105.00
77200 13	10000	1	4105.00

**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	5510.00
77300 02	5 - 50	0.5	1	5510.00
77300 03	50 - 200	1.0	1	5510.00
77300 04	200 - 1000	5.0	1	5510.00
77300 05	10 - 100	0.5	1	5510.00
77300 06	100 - 1000	5.0	1	5510.00
77300 07	2 - 20	0.1	1	5510.00
77300 08	20 - 200	1.0	1	5510.00
77300 09	1000 - 5000	50.0	1	6220.00
77300 10	1000 - 10000	100.0	1	6220.00



**Plastic Micro-Pipette Tips, Universal Type**

Cat No.	Capacity Range $\mu$ l	Compatible with Micro-Pipette	Qty per Pack	Maximum Price Rs/Pack
77400 001	0.5 - 20	77301 01, 77301 07, 77300 01, 77300 07	1000	625.00
77400 002	0.5 - 200	77200 01, 77200 02, 77200 03, 77200 04, 77200 05, 77200 06, 77200 07, 77201 01, 77201 02, 77201 03, 77201 04, 77201 05, 77201 06, 77201 07, 77300 02, 77300 03, 77300 05, 77300 08, 77301 02, 77301 03, 77301 05, 77301 08	1000	505.00
77400 003	100 - 1000	77200 08, 77200 09, 77200 10, 77300 04, 77300 06, 77201 08, 77201 09, 77201 10, 77301 04, 77301 06	1000	800.00
77400 004	1000 - 5000	77200 11, 77200 12, 77300 09, 77201 11, 77201 12, 77301 09	100	920.00
77400 005	1000 - 10000	77201 13, 77301 10, 77200 13, 77300 10	100	2010.00



## 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	11050.00

# Bottle Top Dispenser - RIVIERA



Without Recirculation



With Recirculation

## Features :

- Ergonomic Design enables low pressure dispensing for even larger volumes
- Dual graduation marks enable precise volume setting & visibility from both sides
- Unique piston mechanism allows cleaning & servicing of piston cylinder without disturbing calibration
- Volume lock ensures any accidental discharge
- Spring-less valve design offers high-chemical resistance and long-life with minimal maintenance
- Telescopic filling tube suitable for different sizes of Bottles
- Discharge tube with 360° rotation makes it convenient to dispense in multiple vessels
- The device comes with 4 additional adapters for most common bottle sizes (28mm, 38mm, 40mm, 45mm)
- The device can be easily calibrated with a single tool
- Calibrated as per ISO 8655 standard. Provided with individual calibration certificate

### Bottle Top Dispenser, without Recirculation, RIVIERA

Cat No.	Recirculation	Volume Range ml	Volume Division ml	Accuracy %	Repeat-ability %	Qty Pack Per Pcs.	Maximum Price Rs. / Pc.
78600 0025	No	0.25 - 2.5	0.05	0.6	0.2	1	12430.00
78600 0050	No	0.5 - 5	0.10	0.5	0.2	1	12430.00
78600 0100	No	1- 10	0.20	0.5	0.2	1	12430.00
78600 0250	No	2.5 - 25	0.50	0.5	0.2	1	18310.00
78600 0300	No	2.5 - 30	0.50	0.5	0.2	1	18310.00
78600 0500	No	5 - 50	1.00	0.5	0.2	1	18310.00
78600 0600	No	5 - 60	1.00	0.5	0.2	1	18310.00

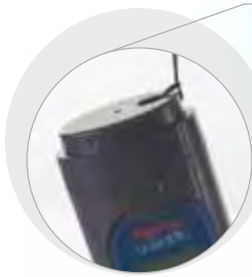
### Bottle Top Dispenser, with Recirculation RIVIERA

Cat No.	Recirculation	Volume Range ml	Volume Division ml	Accuracy %	Repeat-ability %	Qty Pack Per Pcs.	Maximum Price Rs. / Pc.
78700 0025	Yes	0.25 - 2.5	0.05	0.6	0.2	1	16725.00
78700 0050	Yes	0.5 - 5	0.10	0.5	0.2	1	16725.00
78700 0100	Yes	1- 10	0.20	0.5	0.2	1	16725.00
78700 0250	Yes	2.5 - 25	0.50	0.5	0.2	1	22605.00
78700 0300	Yes	2.5 - 30	0.50	0.5	0.2	1	22605.00
78700 0500	Yes	5 - 50	1.00	0.5	0.2	1	22605.00
78700 0600	Yes	5 - 60	1.00	0.5	0.2	1	22605.00

# Thermo Scientific Eutech Expert pH & Expert CTS Testers

## Main Features

- User friendly • One year warranty • Large 4 digit double line display
- Simultaneous temperature display • Battery life, ready & calibration indicators
- Automatic temperature compensation • Auto pH buffer recognition & calibration



Lanyard provision enables easy transport for on-the-go measurement



Easy battery replacement – No special tools required



Pocket tester floats & meets waterproof IP67 rating



Cap secures to the top of the tester when not in use



Wide, stable base allows the tester to stand independently



### Display:

- Large 4 digit double line display and wide viewing angle make it easy to read and record measurements
- Battery life, ready, and calibration indicators simplify measurement and pocket tester maintenance
- Simultaneous display of temperature; user selectable °C or °F

### Keypad:

- Easy to operate and intuitive user interface with power, calibration, menu and enter keys
- One push calibration: Immerse sensor in calibration solution and press "Cal"
- Auto pH buffer recognition and calibration

### Cap:

- Gasketed o-ring seal on Eutech Expert pH tester prevents leaks during measurement and storage
- Transparent cap with a fill line indicator for measurement and calibration – no beakers or sample cups needed
- New symmetrical cap can face forward or backward

### Additional Features:

- Automatic Temperature Compensation for greater accuracy
- Auto off function after 8.5 minutes of non-use to extend battery life
- Multi-language instructions available
- Acrylonitrile Butadiene Styrene (ABS) plastic body is durable and chemically resistant

**Deluxe to Standard Bench pH Meters To Suit Your Pocket**

**Work Better And Faster**

*Experience Results*

**Deluxe Bench pH/mV/°C/°F Meter .....  
Perfect Choice For QC,  
R&D Laboratories, Productions Plants**



**ECPH27005E-P, pH Meter With  
Special pH Electrode EC620131 & Printer**

- ▶ Fulfill Your Requirement For 5 Point Calibration, GLP & Printer Password Protection for Setup and Calibration



**ECPH27005E, pH Meter With  
Special Electrode EC620131**

**Features :**

- Up to 6-point calibration with auto-buffer recognition
- Non-volatile memory holds up to 500 data points-time and date-stamped for GLP compliance
- Cal-due alarm-no more out-dated calibrations!
- Bi-directional RS232 for easy data transfer to computer
- Password protection for setup and calibration



*User-friendly & accurate*

**Standard Bench pH/mV/°C/°F Meter**






**ECPH70042GS with special  
pH electrode EC620131**

- ▶ **Ideal choice for 5 point calibration requirements in Laboratories, productions plants**



**Features :**

- Large, comprehensive screen that displays readings, calibration points and electrode indicator
- Ready indicator alerts when readings are stable
- **Up to 5-point push button calibration with auto-buffer recognition**
- Non-volatile memory holds up to 100 data points
- Integral electrode holder



Models		ECPH70042S	ECPH70042GS	ECPH27005E	ECPH27005E-P
<b>Bench Meters pH/mV/Temperature</b>					
Measuring Parameter		pH /mV/ °C / °F		pH /mV/ °C / °F	
pH	Range	-2.00 to 16.00 pH		-2.000 to 20.000 pH	
	Resolution	0.01 pH		0.1 / 0.01/ 0.001 pH (selectable)	
	Accuracy	± 0.01 pH		± 0.002 pH + 1 LSD	
ORP	Range	± 2000 mV		± 2000 mV	
	Resolution	0.1 (± 199.9 mV) / 1 mV (beyond)		0.1 mV	
	Accuracy	± 0.2(± 199.9 mV) / ± 2 mV (beyond)		± 0.2 mV	
Temp. Range	Range	0.0 to 100.0°C (32.0 to 212.0°F)		0.0 to 100.0°C (32.0 to 212.0°F)	
	Resolution	0.1 °C /0.1 °F		0.1°C /0.1°F	
	Accuracy	±0.3°C / ±0.5°F (0 to 70°C)		± 0.3°C /±0.5°F (0 to 70°C)	
ATC /MTC		0 to 100°C (pH only)		0 to 100°C (pH only)	
Buffer Options		USA ( pH 1.68, 4.01, 7.00, 10.01,12.45) NIST (1.68, 4.01, 6.86, 9.18, 12.45)		USA, NIST, DIN, User 1, User 2, Custom	
No. of pH Calibration Points		5 points		6 points	
Built-in Electrode Arm		Yes		Yes	
Memory		100 Data sets		500 Data sets	
GLP		---		Yes	
Input		DC socket, BNC, 2.5 mm phono (ATC), phono (reference)		DC socket, BNC, 2.5 mm phono (ATC), phono (reference), phono (RS232)	
Output		---		RS 232C (via cable)	
Printer		---		---	
Electrode		Included ECFC7252101B	Included EC620131	Included EC620131	
Temperature Probe		Included PH5TEMB01P			
Power Requirements		Included, 100 /240VAC SMPS Power Adapter, 9V,6W, CENTRE +ve		Included, 100 /240VAC SMPS Power Adapter, 9V,6W	
Dimensions (LxWxH);Weight	Meter	17.5 (L) x 15.5 (W) x 6.9 (H) cm ; 650 g			
	Boxed	30.8 (L) x 23.5 (W) x 12.4 (H) cm ; 1800 g			

Product Code	Cat No	Description	Price Rs./Pc.
ECPH70042S	8042 006	pH 700 meter with plastic body, open pore pH electrode ECFC7252101B, ATC Probe PH5TEMB01P, integral electrode holder & 100/240 VAC Adapter (ORP Electrode to be ordered separately)	39600.00
ECPH70042GS	8042 007	pH 700 meter with glass body, open pore pH electrode EC620131, ATC Probe PH5TEMB01P; integral electrode holder & 100/240 VAC Adapter (ORP Electrode to be ordered separately)	52200.00
ECPH27005E	8057 013	pH 2700 meter with glass body, open pore pH electrode EC620131, ATC Probe PH5TEMB01P; integral electrode holder, 100/240 VAC Adapter and RS232 cable (ORP Electrode to be ordered separately)	72000.00
ECPH27005E-P	8057 014	pH 2700 meter with glass body, open pore pH electrode EC620131, ATC Probe PH5TEMB01P; integral electrode holder, 100/240 VAC Adapter, RS232 cable and AN-270 Dot Matrix Printer (ORP Electrode to be ordered separately)	104400.00
EC620131	8034 015	Glass-body pH combination electrode, reference double junction ,Ag/AgCl Sealed, 12 x 120 mm, BNC connector, 1m cable length	21600.00
ECFC7960101B	8052 007	General purpose plastic-body single junction gel-filled ORP electrode, 12 x 90mm, BNC connector, 1m cable length	20700.00
ECFC7960201B	8052 008	General purpose plastic-body double junction gel-filled ORP electrode, 12 x 90mm, BNC connector, 1m cable length	22500.00
AN-270	8057 015	Dot Matrix Printer, Brand ANTECH	36000.00
ECPH5TEMB01P	8034 003	ATC Probe (for Tutor, pH 510, pH 700, Ion 700, pH 2700, Ion 2700), 1m cable length	7920.00

Models		ECPC70043S	ECCON70043S
<b>Bench Meters, Conductivity &amp; Multi-parameter Meters</b>			
Measuring Parameter		pH/mV/CONDUCTIVITY / TDS / TEMP	Conductivity/ TDS / TEMP
Highlights		Large LCD Display	Large LCD Display
pH	Range	-2.00 to 16.00 pH	-
	Resolution	0.01 pH	-
	Accuracy	±0.01 pH	-
	Calibration Points	Up to 5	-
ORP	Range	± 2000 mV	-
	Resolution	0.1 mV (±199.9 mV) / 1 mV (beyond)	-
	Accuracy	±0.2 mV (±199.9 mV) / ±2 mV (beyond)	-
Conductivity	Range	0.01 to 200.0 mS/cm	
	Resolution	0.01 µS; 0.1 µS; 1 µS; 0.01 mS; 0.1 mS *	
	Accuracy	±1% Full scale	
	Calibration Points	Up to 5	
	Cell Constant	0.1 / 1.0 / 10.0	
TDS	Range	0.01 to 100 ppt @0.5 TDS factor (to 200 ppt @ 1.0 TDS factor)	
	Resolution	0.01 ppm; 0.1 ppm; 1 ppm; 0.01 ppt; 0.1 ppt #	
	Accuracy	±1% Full Scale + 1 digit	
	Calibration Points	Up to 5	
Temperature	Range	0.0 to 100.0 °C / 32.0 to 212.0 °F	
	Resolution	0.1 °C / 0.1 °F	
	Accuracy	±0.5 °C / ±0.9 °F	
	Compensation	ATC/MTC	
Meter Features	Display	Custom Dual Display LCD (5.6 x 7.5 cm)	
	Memory	100 Data sets	
	Electrode Arm	Yes, Built-in	
	Temperature Coefficient	0.00 to 10.00%	
	Temperature Normalization	15 TO 30 °C	
	Power Requirements	9 V DC Adapter, 500 mA (220 VAC)	
Standard Supply	Electrode	Included, ECFC7252101B, pH electrode and CONSEN9501D, ultem body Cond./ TDS electrode, cell const. 1.0 , both 1 m cable. ORP electrode to be ordered separately	Included, ultem body ECCONSEN9501D, cell constant 1.0, 1 m cable
Dimensions (LxWxH) ; Weight	Meter	17.5 x 15.5 x 6.9 cm ; 650 g	
	Boxed	30.8 x 23.5 x 12.4 cm ; 1800 g	

\* 1 mS = 1000 µS/cm, # 1 ppt = 1000 ppm

Product Code	Cat No.	Description	Price Rs./Pc.
ECPC70043S	8050 012	Eutech PC 700 Meter With pH Electrode (ECFC7252101B), Conductivity Probe (CONSEN9501D) & include 100/240 VAC power adapter and an integral electrode holder.	85500.00
ECCON70043S	8050 009	EUTECH CON700 meter with Conductivity/ ATC Probe (ECCONSEN9501D), Integral Electrode Holder & power Adapter	63000.00
<b>OPTIONAL ACCESSORIES</b>			
ECFC7960201B	8052 008	General purpose plastic body double junction gel-filled ORP Electrode, 12x 90mm, BNC Connector 1 meter cable length	22500.00
ECCONSEN9501D	8050 010	Conductivity Electrode Ultem-body, ATC, Cell Constant = 1.0, 16 x 144mm, 1 m cable	27000.00

Economy to Deluxe

# BENCH METERS To Suit Your Pocket

pH / mV / Conductivity / TDS / °C / °F



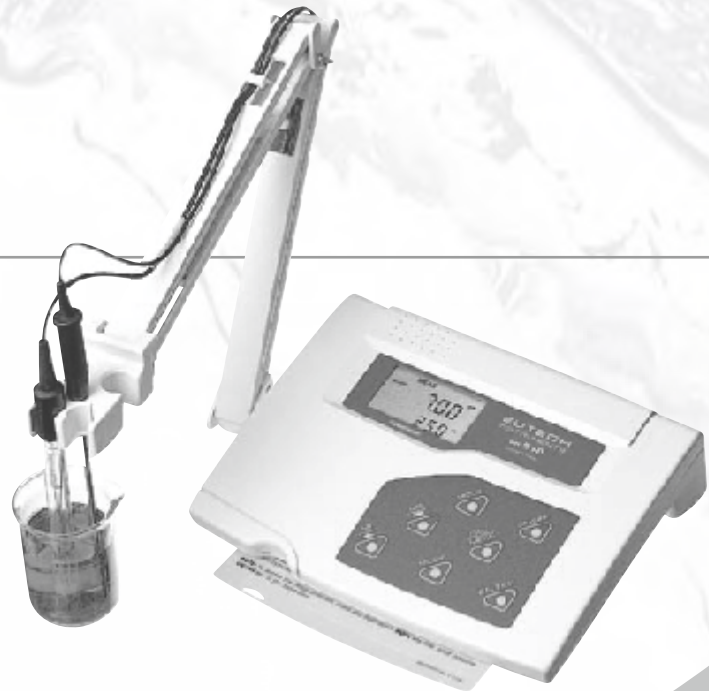
Solution  
*For* Your Laboratory  
To Work Better, **FASTER !**

## 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





## Multi-Parameter PC 700



The multi-parameter Eutech PC 700 measures pH, ORP, conductivity and temperature with a single meter. User-friendly with advanced features and a large custom-size display

**EUTECH**  
INSTRUMENTS  
*Technology Made Easy...*





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 AN-786-1, 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	38700.00
ECPH51042S-I	8042 003	CyberScan pH 510 pH/mV Meter with Indigenous Glass pH electrode AN-786-1 Indigenous ATC probe, Integral electrode holder & Power adapter	36000.00
<b>OPTIONAL ACCESSORIES</b>			
ECFC7252101B	8034 004	General Purpose Plastic-body Single Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	6300.00
AN-786-1	8034 009	General Purpose Glass-body Refillable Indigenous pH Combination Electrode, BNC connector, 1m cable length	2250.00
ECFC7960201B	8052 008	General Purpose Plastic-body Double Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	22500.00
ECFC7960101B	8052 007	General Purpose Plastic-body Single Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	20700.00
ECPH5TEMB01P	8034 003	ATC Probe (for pH 510), 1m cable length	7920.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug ,9V,6W, CENTRE +ve ( for Cyberscan 510 series)	4500.00

Conductivity/ TDS Handheld Meters Specifications		ECCONWP15003K	ECCON603PLUSK	ECTDS603PLUSK
Measuring Parameter		Conductivity/TDS/°C	Conductivity/°C	TDS//°C
Conductivity	Range	0 to 200 mS	0- 19.99, 19.9-199.9, 199- 1999 µS/cm; 2.00- 19.99, 20.0 - 199.9 mS/cm	-
	Resolution	0.01 µS to 0.1mS	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 to 200 ppt	-	0- 9.99, 10-99.9, 100-999 ppm; 1.0-9.99 , 10- 99.9 ppt
	Resolution	0.01 ppm to 0.1 ppt	-	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	1.0	-	0.4 to 1.0
Calibration Points	Auto/Manual (Conductivity), Manual (TDS; 1 point per range)		4 points (1 per range auto), 5 points (1 per range manual)	5 points (1 per range manual)
Temperature	Range	-10.0 to 110.0° C (14.0 to 230.0 °F)	0.0 to 100 °C ( 32 to 212 °F)	
	Resolution	0.1° C / 0.1 °F		
	Accuracy	± 0.5° C / ± 0.9 °F		
	Compensation	Automatic/ Manual from -10 to 110 °C	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	Up to 150 data sets	-	
	Operating Temperature	0 to 50 °C		
	LCD Display	Three line custom LCD	Single display LCD (4.5 x2.3 cm)	
Power Requirements	2x1.5VAA batteries (included), AC Adapter (Optional)	4 x 1.5 V 'AAA' alkaline batteries		
Dimensions (L x W x H); Weight	Meter	20 x 8.3 x 5.7 cm; 0.5kg	15.7 x 8.5 x 4.2 cm/255g	
	Boxed	23 x 23 x 7 cm; 0.7kg	36 x 28 x 8 cm/ 1555 g	

Product Code	Cat No.	Description	Price Rs./Pc.
ECCONWP15003K	8050 002	CON150 meter, Conductivity cell (K = 1.0), Grip-Clip, two AA batteries, hard carry case, calibration solutions	47700.00
ECCON603PLUSK	8050 001	COND 6 + Conductivity Meter with electrode ECCONSEN91B & Conductivity carrying kit set	38700.00
ECTDS603PLUSK	8051 001	TDS 6 + TDS Meter with electrode ECCONSEN91B & TDS carrying kit set	38700.00
Optional Accessories			
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 + )	25200.00
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 150)	25200.00
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 150)	39600.00
ECCONSEN92W	8050 006	2-Cell Conductivity/ATC Electrode, 10.0 cell constant, Platinum Sensor, Epoxy-Body ( for CON 150)	25200.00
60x426 401	8050 011	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug , 9V,6W, Centre + ve ( for CON 150)	8100.00

pH/ORP Handheld Meters Specifications		CyberScan Dual-Display	EcoScan Single-Display
		ECPHWP15002K	ECPH602PLUSK
			
Measuring Parameter		pH/ORP/°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 points (USA/ NIST), Up to 6 points (DIN)	Up to 3
	Buffer Sets	USA(1.68, 4.01, 7.00, 10.01, 12.45), NIST (1.68, 4.01, 6.86, 9.18, 12.45), DIN	USA (pH 4.01,7.00, 10.01) NIST(pH 4.01, 6.86, 9.18) Pb (pH 4,10, 6.97)
ORP	Range	±2000 (Electrode optional)	±1000 mV
	Resolution	0.1mV up to ±999; 1 mV beyond	0.1 mV(+ 199.9mV) ;1 mV (> + 199.9mV)
	Accuracy	±0.2mV + 2LSD or +0.5% of reading; whichever is greater	+0.2mV (+ 199.9mV);2 mV (>+ 199.9mV)
	Calibration	±200mV	-
Temperature	Range	-10.0 to 110.0 °C(14.0 to 230.0 °F)	0.0 to 100.0 °C
	Resolution	0.1 °C / 0.1 °F	0.1 °C
	Accuracy	±0.5 °C / ±0.9 °C	±0.5 °C
Meter Features	Temperature Compensation	ATC/MTC	ATC/MTC (0 to 100 °C)
	Memory	Up to 150 Datasets	-
	Power Requirements	2x1.5V AA batteries (included) or AC Adapter (Optional)	4x 1.5 V 'AAA' Alkaline batteries
Dimensions (LxWxH) ; Weight	Meter	20 x 8.3 x 5.7 cm; 0.5 kg	15.7 x 8.5 x 4.2 cm; 255 g
	Boxed	23 x 23 x 7 cm; 0.7 kg	36 x 28 x 8 cm; 1555 g

Product Code	Cat No.	Description	Price Rs./Pc.
ECPHWP15002K	8052 003	pH 150 Meter with double-junction pH electrode & ATC probe, Grip-Clip™, two AA batteries, hard carry case, pH buffers, storage solution, rinse solution	42300.00
ECPH602PLUSK	8052 002	pH 6 + pH/ORP Meter with single junction pH electrode ECFC7252101B, ATC probe & pH carrying kit set	37800.00
<b>Optional Accessories</b>			
ECPH5TEM01P	8052 004	ATC probe (for pH 6 + , pH 5 + , pH 150 only); 1m cable length	7200.00
ECFC7252101B	8034 004	General Purpose Plastic-body Single Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	6300.00
ECFC7252201B	8052 006	General Purpose Plastic-body Double Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	9180.00
ECFC7960101B	8052 007	General Purpose Plastic-body Single Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	20700.00
ECFC7960201B	8052 008	General Purpose Plastic-body Double Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	22500.00
60x426 401	8050 011	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug, 9V, 6W, CENTRE + ve ( for pH 150 )	8100.00

pH & Conductivity Handheld Meters with PC Interface Specifications		ECPHWP45002K	ECCONWP45003K
			
Measuring Parameter		pH / mV / ION / °C	Conductivity / TDS / Salinity / °C
pH	Range	-2.00 to 16.00 pH	—
	Resolution	0.01 pH	—
	Accuracy	±0.01 pH	—
	Calibration Points	Up to 6 points (USA ,NIST,DIN Custom)	—
mV	Range	±2000 mV	—
	Resolution	0.1 mV ±999.9 mV; 1 mV beyond	—
	Accuracy	±0.2 mV +2 LSD or +0.5 % of reading; whichever is greater	—
	Calibration	±200mV	—
ION	Range	0.0 to 2000 ppm	—
	Resolution	0.01/0.1/1 ppm	—
	Accuracy	±0.5 % full scale (monovalent); ± 1% full scale (divalent);	—
	Calibration Points	From 2-4 or 2-5 points; 0.10, 1.00, 10.0, 100.0 & 1000 / 0.20, 2.00, 20.0, 200.0 & 2000 / 0.50, 5.00, 50.0 & 500.0	—
Conductivity	Range	—	0 to 200 mS
	Resolution	—	0.01 µS to 0.1 mS
	Accuracy	—	±1% full scale
	Calibration	—	Auto/manual;1 point/range
TDS	Range	—	0 to 200 ppt (TDS factor 1.0)
	Resolution	—	0.01 ppm to 0.1 ppt
	Accuracy	—	±1% full scale
	Calibration	—	Manual; 1 point/range
Salinity	Range	—	0 to 50 ppt
	Resolution	—	0.01
	Accuracy	—	±1% full scale
	Calibration	—	Manual; 1 point
Temperature	Range	-10.0 to 110.0 °C (14.0 to 230.0 °F)	
	Resolution	0.1 °C/ °F	
	Accuracy	±0.5 °C; ±0.9 °F	
	Calibration	Offset in 0.1 increments, ±10 °C or ±18 °F	
Display	Custom LCD with backlight		
Memory	Stores up to 500 data sets		
Output	USB , RS232 output with optional data cable		
Real-Time Clock	Time and date stamp on Calibration and stored data		
Power	Two AA batteries (included), AC adapter (optional)		
Dimensions (LxWxH) ; Wt.	Meter	20 x 8.3 x 5.7 cm; 0.5 kg	
	Boxed	23 x 23 x 7 cm; 0.7 kg	

Product Code	Cat No.	Description	Price Rs./Pc.
ECPHWP45002K	8052 015	pH 450 Meter Kit with double-junction pH electrode ECFC7252201B and ATC probe, Grip-Clip™, two AA batteries, hard carry case, USB cable, pH buffers, storage solution, rinse solution. ORP electrode & ION electrode to be ordered separately.	56700.00
ECCONWP45003K	8050 015	CON 450 Meter Kit, conductivity cell ECCONSEN91W (K = 1.0), Grip-Clip™, two AA batteries, hard carry case, USB cable, calibration solutions	72000.00
<b>Optional Accessories</b>			
ECFC7252201B	8052 006	General Purpose Plastic-body Double Junction Gel-Filled pH Combination Electrode, 12x90mm, BNC connector, 1m cable length	9180.00
ECFC7960201B	8052 008	General Purpose Plastic-body Double Junction Gel-Filled ORP Electrode, 12x90mm, BNC connector, 1m cable length	22500.00
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	25200.00
ECCONSEN72W	8050 005	2 Platinum Rings Epoxy-body Electrode with ATC, cell constant K = 0.1, 16x110 mm, 6-pin connector, 1m cable length	39600.00
ECCONSEN92W	8050 006	2-Cell Conductivity/ATC Electrode, 10.0 cell constant, Platinum Sensor, Epoxy-Body	25200.00
60x426 401	8050 011	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug, 9V,6W, Centre + ve	8100.00

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		ECSALT603PLUSK	SALTTEST11
		Measuring Parameter	
Highlights		High accuracy and wide range Salinity measurements	
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	
Meter Features	Coefficient (Per °C)	0.0- 3.0%	2 %
	Normalization	20.0 or 25.0 °C	25.0 °C
	Auto-Off	20 Mins after last key pressed	8.5 Mins after last key pressed
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	38700.00
SALTTEST11	8003 006	Waterproof SaltTestr 11 large display tester	16200.00
Optional Accessories			
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 + )	25200.00
ECTDSENSOR	8014 007	Replacement sensor for waterproof SaltTestr 11 & SaltTestr, 2-pin type	4320.00

# Eutech Instruments With a Difference

## Same Reliability, More Convenience

### 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

### Waterproof Handheld Meters 450 series

81% Larger Three Line Display 450 series add backlight

Battery Life Indicator

All Measurements Include Temperature in °C or °F

View Electrode Slope or Probe Efficiency At-A-Glance

Calibration Due Reminder Set automatic notifications from 0 - 60 days

Increased Memory: 500 points with date/time for 450 series

450 series offers upgradable firmware and also can utilize Free Communication Software



Rugged Housing Floats & Meets Waterproof IP67 Rating (With rubber covers)



Utilizes New and Improved Grip-Clip Electrode Holder



Uses Only Two AA Batteries or Optional Universal Power Supply



Integral Built-In Stand for table use or wall mounting



450 Models Offer Output for USB or RS232



# 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...

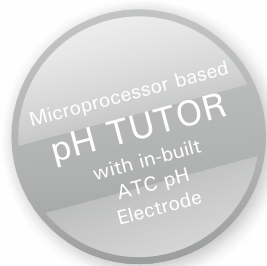
Standardize on a regular basis. Calibration solutions for pH, TDS, Conductivity, Redox, Salinity

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 AN-786-1
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	32400.00
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	27900.00
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	24300.00
ECPHTUTOR-I	8034 010	CyberScan pH Tutor meter with indigeneous refillable glass pH electrode AN-786-1, BNC connector, 1m cable length, indigenous electrode stand and power adapter. ATC probe to be ordered separately	19800.00
ECFC7252101B	8034 004	General purpose plastic-body single junction gel-Filled pH combination electrode, 12x90mm, BNC connector, 1m cable length	6300.00
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	9450.00
ECFC7352901B	8034 005	General purpose plastic-body "3-in-1" pH/Temp. combination electrode, 12x90mm, BNC connector, 1m cable length (for pH Tutor)	10800.00
AN-786-1	8034 009	General purpose glass-body refillable indigenous pH combination electrode, BNC connector, 1m cable length, <b>Make ANTECH.</b>	2250.00
ECPH5TEMB01P	8034 003	ATC Probe, 1m cable length (for pH Tutor)	7920.00
ECELSTDCNEW	8034 007	Electrode stand with swivel arm (for pH Tutor)	7920.00
60X030130	8050 007	100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug, 9V,6W, CENTRE + ve (for Tutor)	4500.00



## 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)	10800.00
ECFG7350401B	8034 006	Glass body	A,F	0 – 13	0 to 100	110	12	Ag/AgCl (R)	9450.00
ECFG6351101B	8034 013	Glass body	J	0 – 13	0 to 100	55	8	Ag/AgCl (S)	27000.00
ECFC7252101B	8034 004	Plastic body	A, L	1 – 13	0 to 80	110	12	Ag/AgCl (S)	6300.00
Ec620131	8034 015	Glass body	A,B,C,D,L,O,Q	0 – 14	0 to 80	120	12	Ag/AgCl (S)	21600.00
EC620130	8034 016	Glass body	A,B,C,G,L,O,Q	0 – 14	0 to 80	160	12	Ag/AgCl (R)	30600.00
EC620132	8034 017	Plastic body	A,B,G,L,O,Q	0 – 14	0 to 60	105	12	Ag/AgCl (S)	18000.00
Ec620133	8034 018	Glass body	A,B,J,O,Q	2 – 11	0 to 50	80	6	Ag/AgCl (S)	31500.00
ECFG7252001B	8034 020	Glass body	I	0 – 12	0 to 100	110	12	Ag/AgCl (R)	31500.00
ECFG7370101B	8034 021	Glass body	B, O	0 – 13	0 to 100	110	12	Ag/AgCl (R)	27000.00
ECFG4390401B	8034 022	Glass body	B, C, M	0 – 13	-5 to 80	55	4	Calomel (R)	31500.00

**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.

**I** Surface Measurement such as paper, skin, textile, leather & agar plates

**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 currettes 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 100.0 ppm .. to 1000 ppm .. to 10.00 ppt*	.. to 1000 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	Cat No.	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)	16200.00
ECTEST11	8036 008	Waterproof ECTestr11 dual range tester with ATC & temperature display (0 - 2000 µS/cm; 0 -20.00 mS/cm)	10400.00
ECOECTESTLOW	8036 010	Waterproof EcoTestr EC Low tester with ATC, 1 point calibration	6750.00
ECOECTESTHIGH	8036 011	Waterproof EcoTestr EC High tester with ATC; 1 point calibration	6750.00
TDSTEST11PLS	8037 009	Waterproof TDSTestr11 + multi range tester with ATC & temperature display (0 - 100.0 ppm; 0 - 1000 ppm; 0 - 10.00 ppt)	16200.00
TDSTEST11	8037 008	Waterproof TDSTestr11 dual range tester with ATC & temperature display (0 - 1000 ppm; 0 -10.00 ppt)	10400.00
ECOTDSTESTLOW	8037 010	Waterproof TDS Testr TDS Low tester with ATC, 1 point Calibration	6750.00
ECOTDSTESTHIGH	8037 011	Waterproof TDS Testr TDS High tester with ATC; 1 point Calibration	6750.00



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		-999 to +1000 mV
	Resolution	0.1 pH		0.01 pH		0.1 pH	0.01 pH		1 mV
	Accuracy	±0.1 pH		±0.01 pH		±0.1 pH	±0.01 pH		±2 mV
	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)					
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	9450.00
PHTEST20	8020 002	Waterproof pHTestr 20 Tester with ATC; ±0.01 pH accuracy	12600.00
PHTEST30	8020 003	Waterproof pHTestr 30 Tester with ATC and Temperature Readout; ±0.01 pH resolution	16200.00
PHTEST10BNC	8020 004	Waterproof pHTestr 10 BNC Tester with MTC; BNC connector sensor; ±0.01 pH resolution (meter only – electrode to be ordered separately)	13500.00
PHSPEAR	8020 005	Waterproof pHSpear Tester with MTC; double-junction spear-tip electrode; ±0.01 pH accuracy	35100.00
ORPTEST10	8016 003	Waterproof ORPTestr 10 Large Dual Display Tester (-999 to +1000 mV)	20700.00
ECOPHTEST1	8020 008	Waterproof EcoTestr pH 1 Tester without ATC, 1 point Calibration	6750.00
ECOPHTEST2	8020 009	Waterproof pHTestr 2 Tester with ATC; 3 point Calibration	7650.00
PHSENSOR03DJ	8022 001	Replacement Double Junction Sensor for pHTest10, 20, 30	5940.00
PHSENSOR04	8021 006	Replacement Double Junction Spear-tip Electrode for pHSpear	20700.00

## Thermo Scientific Eutech Expert pH Testers

pH / Temperature

Simultaneously measure pH and temperature with the Thermo Scientific™ Eutech™ Expert pH testers, a pocket sized tester designed to provide accurate measurements on the go for a variety of applications

- Auto-buffer recognition and auto-calibration make on-site calibration quick and easy
- 3-point calibration allows the tester to accurately measure pH across the acid and alkali ranges
- ±0.1 % accuracy

## Thermo Scientific Eutech Expert CTS Testers

Conductivity / TDS / Salinity / Temperature

The Thermo Scientific™ Eutech™ Expert CTS tester accurately measures conductivity, TDS, and salinity in one single instrument, making it an ideal solution for many applications.

### Specifications :

Models		EXPERTPH	EXPERTCTS
Measuring Parameter		pH / °C / °F	Conductivity / TDS /Salinity / °C / °F
pH	Range	0.0 to 14.0 pH	-
	Resolution	0.1 pH	-
	Relative Accuracy	±0.1 pH	-
Conductivity	Range	-	0.00 to 20.00 mS/cm
	Resolution	-	10 S/cm below 2.00 mS/cm, 0.10 mS/cm above 2.00 mS/cm
	Relative Accuracy	-	±2 % full scale ±1 LSD
	Automatic Calibration Values	-	84 µS/cm, 1413 µS/cm, 12.88 mS/cm
TDS	Range	-	0.00 to 20.00 ppt
	Resolution	-	10 ppm below 2.00 ppt, 0.10 ppt above 2.00 ppt
	Relative Accuracy	-	±2 % full scale ±1 LSD
	TDS Factor	-	0.40 to 1.00 (selectable)
Salinity	Range	-	0.0 to 10.0 ppt
	Resolution	-	0.10 ppt
	Relative Accuracy	-	±2 % of full scale ±1 LSD
No. of Cal Points		1 to 3 points	One calibration point per parameter
Temperature	Range	0 to 50.0 °C 32.0 to 122.0 °F	0 to 50.0 °C; 32.0 to 122.0 °F
	Resolution	0.1 °C / 0.1 °F	0.1 °C / 0.1 °F
	Relative Accuracy	±0.5 °C / ±0.9 °F +1 LSD	±0.5 °C / ±0.9 °F +1 LSD
	Automatic Temp. Compensation	Yes	Yes
General	Power	Includes (4) batteries (A76 or LR44 equivalent)	Includes (4) batteries (A76 or LR44 equivalent)
	Auto Off	8.5 mins after last key press	8.5 mins after last key press
	Operating Temp.	5 to 45 °C	5 to 45 °C
	Ingress Protection	IP67 rating; waterproof	IP67 rating; waterproof
	Dimensions(LxWxH)	17 x 4.5 x 3 cm	17 x 4.5 x 3 cm






- Large 4 digit double line display and wide viewing angle make it easy to read and record measurements
- Battery life, ready, and calibration indicators simplify measurement and pocket tester maintenance

### Applications

- Hydroponics • Agriculture
- Aquaculture & Aquariums
- Pools & Spas • Education
- Cooling Towers • Water Treatment
- Environmental Monitoring
- Food & Beverage • Manufacturing
- Printing and more!



Product Code		Description	Price Rs./Pc.
EXPERTPH	8020 010	Waterproof Expert pH pocket tester with ATC and temp display, 3 point Calibration, ±0.1 pH accuracy	8550.00
EXPERTCTS	8020 012	Waterproof Expert CTS Conductivity/ TDS/salinity pocket tester with ATC and temperature display (0.00-20.00mS/cm; 0.00 -20.00 ppt; 0.0 -10.0 ppt)	9450.00

		PCSTestr 35	PCTestr 35	PTTestr 35
<b>Multi-Parameter Pocket Testers Specifications</b>				
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	-	±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)	17100.00
PTTEST35	8049 002	Waterproof PTTestr 35 pH/TDS/Temp Tester with ATC; (±0.1 pH resolution; 0 - 1000 ppm; 0 - 10.00 ppt)	17100.00
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%)	22500.00
PCSENSOR	8049 004	Replacement pH/Conductivity/Temp Sensor for PCTestr 35, PTTestr 35, PCSTestr 35	8100.00

## Thermo Scientific Eutech TN-100 Turbidity Meter

### Waterproof Hand Held Turbidity Meter

#### Features

- Lightweight, ergonomic, and waterproof to IP67 –and it floats!
- New design for fast response – full step change in as little as 6 seconds
- Auto range up to 2000 NTU Designed to perform over 1,200 tests with most AAA batteries with advanced power management design
- Meets ISO 7027 standards and offers consistent light source for outstanding accuracy

#### Technical Specifications

Turbidity Portable Meter	ECTN100IR
Range	0 to 2000 NTU
Automatic Range Selection	0.01 to 19.99 NTU; 20.0 to 99.9 NTU; 100 to 2000 NTU
Resolution	0.01 NTU (0 to 19.99 NTU); 0.1 NTU (20.0 to 99.9 NTU); 1 NTU (100 to 2000 NTU)
Accuracy	< 0.1 NTU for 0.02 NTU standard; ±2 % of reading ±1 digit for 0 to 500 NTU; ±3 % of reading ±1 digit for 501 to 2000 NTU
Repeatability	< ±1 % of reading
Calibration	Up to 4 points
Calibration Standards	0.02 NTU, 20.0 NTU, 100 NTU, 800 NTU
Response Time	< 6 secs for full step change
Sample Volume	10 mL
Light Source	Infrared-emitting diode (850 nm wavelength)
Operating Temperature Range	0 to 50 OC
Sample Temperature Range	0 to 50 OC
Enclosure Type & Rating	ABS plastic & IP67 rated
Power	4 x 1.5 V 'AAA' alkaline batteries (> 1200 readings)
Certifications / Compliance	FCC part 15 class A, TUV 3 in 1, CE, RoHS
Dimensions (LxWxH)	Meter: 15.5 x 6.8 x 4.6 cm; Boxed: 35.5 x 16.5 x 10.5 cm
Weight	Meter: 200 g; Boxed: 1,160 g



Product Code	Cat No.	Description	Price Rs./Pc.
ECTN100IR	<b>8013 003</b>	Waterproof TN-100 handheld turbidimeter with set of 4 calibration standards (800, 100, 20.0 & 0.02 NTU), set of 7 sample cuvettes (vials), lint-free cloth, silicone oil, batteries, and hard carrying case	73800.00
TN100CALKIT	<b>8013 006</b>	Calibration kit set – standard solutions (0.02, 20.0, 100, 800 NTU) 60 mL each and (4) vials	29700.00
ECTN100CUVKIT	<b>8013 010</b>	Pack of 3 sample cuvettes (vials)	9000.00





# CERTIFICATE OF REGISTRATION

This is to certify that

## **Eutech Instruments Pte Ltd**

**(Part of Thermo Fisher Scientific, Inc.)**

7 Gul Circle, #2M-01 Keppel Logistics Building Singapore, Singapore, 629563, Singapore

Refer to Attachment to Certificate of Registration dated August 4, 2021 for additional certified sites  
operates a

## **Quality Management System**

which complies with the requirements of

## **ISO 9001:2015**

for the following scope of certification

**The design and manufacture of water quality measuring instruments.**

Certificate No.: CERT-0121989  
File No.: 1608689  
Issue Date: August 4, 2021

Original Certification Date: March 24, 2011  
Certification Effective Date: August 6, 2021  
Certification Expiry Date: August 5, 2024

Frank Camasta  
Global Head of Technical Services  
SAI Global Assurance





### 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. **Actual shelf life of the solutions will be lesser on account of shipment transit time and Inventory time lag.**

#### pH Buffer Solutions ( 480 ml)

Cat. No.	Product Code No.	Description	Shelf Life from Date of Packing	Maximum Price Rs.
8005 001	ECBU4BT	pH 4.01 buffer	36 months	2160.00
8005 061	ECBU4BTC	pH 4.01 buffer (colored)	36 months	2160.00
8005 002	ECBU7BT	pH 7.00 buffer	36 months	2160.00
8005 062	ECBU7BTC	pH 7.00 buffer (colored)	36 months	2160.00
8005 003	ECBU9BT	pH 9.00 buffer	36 months	2160.00
8005 004	ECBU10BT	pH 10.01 buffer	36 months	2160.00
8005 064	ECBU10BTC	pH 10.01 buffer (colored)	36 months	2160.00
8005 005	ECBU12BT	pH 12.45 buffer	36 months	2160.00
8005 006	ECBU1BT	pH 1.68 buffer	36 months	2160.00
8005 007	ECBU686BT	pH 6.86 buffer	36 months	2160.00
8005 008	ECBU918BT	pH 9.18 buffer	36 months	2160.00
8005 009	ECRE005	pH Electrode Storage Solution	36 months	7200.00

#### Conductivity Solutions (480 ml)

Cat. No.	Product Code No.	Description	Shelf Life from Date of Packing	Maximum Price Rs.
8006 008	ECCON84BT	84 $\mu$ S KCL	12 months	2340.00
8006 001	ECCON100BT	100 $\mu$ S KCL	12 months	2340.00
8006 002	ECCON500BT	500 $\mu$ S KCL	36 months	2340.00
8006 003	ECCON1413BT	1413 $\mu$ S KCL	36 months	2340.00
8006 004	ECCON2764BT	2764 $\mu$ S KCL	36 months	2340.00
8006 005	ECCON1288BT	12.88 mS KCL	36 months	2340.00
8006 006	ECCON1118BT	111.8 mS KCL	36 months	2340.00
8006 007	ECCON5000BT	5.0 mS KCL	36 months	2340.00

#### TDS Solutions (480 ml)

Cat. No.	Product Code No.	Description	Shelf Life from Date of Packing	Maximum Price Rs.
8007 004	EC44250BT	50 ppm	12 months	2340.00
8007 001	EC442300BT	300 ppm	36 months	2340.00
8007 002	EC4421000BT	1000 ppm	36 months	2340.00
8007 003	EC4423000BT	3000 ppm	36 months	2340.00

#### ORP Calibration Standards (480 ml)

Cat. No.	Product Code No.	Description	Shelf Life from Date of Packing	Maximum Price Rs.
8047 001	ECORPPRE	Pretreatment (475 mV)	36 months	4230.00
8047 002	ECORPQUIN	Quinhydrone 263 (263 mV, $\pm$ 30 mV, 25 °C)	36 months	4230.00
8047 003	ECORPQUIN086	Quinhydrone 86 (86 mV)	36 months	4230.00

#### Salinity Calibration Standards (480 ml) □

Cat. No.	Product Code No.	Description	Shelf Life from Date of Packing	Maximum Price Rs.
8048 001	ECNACL5PPT	5 ppt NaCl	36 months	2700.00
8048 002	ECNACL25PPT	25 ppt NaCl	36 months	2700.00
8048 003	ECNACL45PPT	45 ppt NaCl	36 months	2700.00





# CERTIFICATE



This is to certify that

## **KERN**

### **Kern & Sohn GmbH**

Ziegelei 1  
72336 Balingen  
Germany

has implemented and maintains a **Quality Management System**.

Scope:

Development, manufacture and sale of measuring devices and components, in particular scales (also medical scales) and weights.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

## **ISO 9001 : 2015**

Certificate registration no.	223690 QM15
Certificate unique ID	170772061
Effective date	2021-04-30
Expiry date	2024-04-29
Frankfurt am Main	2021-04-14



















### **DQS Medizinprodukte GmbH**

Sigrid Uhlemann  
Managing Director

August-Schanz-Straße 21, 60433 Frankfurt am Main,  
Tel. +49 (0) 69 95427-300, [medical.devices@dqs-med.de](mailto:medical.devices@dqs-med.de)

## 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 ISO standards. These weights and balances can be supplied with DAkkS (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



## KERN ABS-N/ABJ-NM Analytical balance

The bestseller in analytical balances, now with high-quality single-cell weighing system and EC type approval [M]

### 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 g	Reproducibility mg	Linearity mg	Maximum price/Pc. Rs.
10011 1204	ABS 120-4N	0.1	120	0.2	±0.3	143065.00
10011 2204	ABS 220-4N	0.1	220	0.2	±0.3	150940.00
<i>(with internal Calibration)</i>						
10261 1204	ABJ 120-4NM	0.1	120	0.2	±0.3	150940.00
10261 2204	ABJ 220-4NM	0.1	220	0.2	±0.3	164065.00



## KERN ABT Analytical balance

The premium model with single-cell weighing system

### Technical data

- Large LCD display, digit height 14 mm
- Dimensions of weighing plate ø 80 mm
- Overall dimensions WxDxH 217x356x338 mm
- weighing space WxDxH 168x172x223 mm
- Permissible ambient temperature 10°C / 30°C
- Net weight approx. 7 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>internal</i> calibration)	Read out 'd' mg	Weighing range g	Reproducibility mg	Linearity mg	Maximum price/Pc. Rs.
1032 0120	ABT 120-4NM	0.1	120	0.1	±0.2	204750.00
1032 0220	ABT 220-4NM	0.1	220	0.1	±0.2	248065.00

Cat No.	Model KERN (with <i>internal</i> Calibration, Dual Range)	Read out 'd' mg	Weighing range gm	Reproducibility mg	Linearity mg	Maximum price/Pc. Rs.
1033 0120	ABT 120-5DNM	0.01 / 0.1	42 / 120	0.02 / 0.1	±0.05 / 0.2	280875.00
1033 0220	ABT 220-5DNM	0.01 / 0.1	82 / 220	0.02 / 0.1	±0.1 / 0.2	290065.00



optional statistics printer



optional



### KERN EWJ Precision balance

High-quality precision balance with automatic internal adjustment and EC type approval [M]

#### Technical data

- Large LCD display, digit height 16.5 mm
- Dimensions of weighing plate  $\varnothing$  80 mm
- Overall dimensions WxDxH 220x350x90 mm
- Inclusive draft shield 220x315x180 mm
- Permissible ambient temperature 5°C / 40°C
- **Optional** - Rechargeable battery pack internal, operating time up to 15 h without backlight, charging time approx. 4 h, KERN KFB-A06

Cat No.	Model KERN (with <i>internal</i> calibration)	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Maximum price/Pc. Rs.
1034 0300	EWJ 300-3	0.001	300	0.001	0.005	64315.00
1034 0600	EWJ 600-2M	0.01	600	0.01	0.03	51720.00



### Density Determination Set

- Density set for precise and convenient density determination of liquids and solids / 1.
- Suitable for all KERN analytical balances.
- Scope of delivery: Beaker, thermometer, sample holder, adapter, equalizing weights, volume plummet (stainless steel, 20 g), universal submersible basket for solid bodies which float and sink.
- The wire of the submersible basket has a diameter of 0.5 mm and therefore complies with the requirements of DIN EN ISO 1183-1 (Test methods for the determination of density of non-foamed plastics)

Cat No.	Model	Description	Maximum price/Pc. Rs.
1000 0521	YDB-03	Density Determination Set suitable for all KERN Analytical Balances	51190.00



### 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

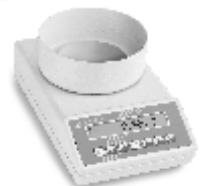
Cat No.	Model KERN	Read out 'd' g	Weighing range g	Reproducibility g	Linearity g	Weighing Plate mm	Maximum price/Pc. Rs.
1022 0120	KB 120-3N	0.001	121	0.001	± 0.003	Ø 81	41705.00
1022 0240	KB 240-3N	0.001	200	0.001	± 0.003	Ø 81	43120.00
1022 1200	KB 1200-2N	0.01	1210	0.01	± 0.03	130 x 130	40260.00
1022 2000	KB 2000-2N	0.01	2010	0.01	± 0.03	130 x 130	43470.00
1022 0010	KB 10000-1N	0.1	10100	0.1	± 0.3	150 x 170	38800.00



### KERN 572

Precision balance

- Optional Extra :
- Statistics printer
  - Standard printer
  - DAkks certificate
  - Rechargeable Battery Pack



572-30, 572-31 & 572-32 with Glass Draft Shield (optional)

Ring Shaped draft shield (standard) only with 572-30, 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	240	0.001	± 0.003	Ø 105	73500.00	
1023 0301	572-31	0.001	300	0.002	± 0.003	Ø 105	76125.00	
1023 0421	572-32	0.001	420	0.002	± 0.005	Ø 105	77615.00	
1023 1610	572-33	0.01	1600	0.01	± 0.03	Ø 150	70430.00	
1023 2410	572-35	0.01	2400	0.01	± 0.03	Ø 150	71945.00	
1023 3010	572-37	0.01	3000	0.02	± 0.05	Ø 150	73330.00	
1023 1210	572-45	0.10	12000	0.05	± 0.15	160 x 200	70430.00	
1023 0024	572-57	0.10	24000	0.10	± 0.30	160 x 200	71945.00	
1023 0501	572-A05	Glass draft shield for Models 572 with d=0.001 g						30190.00



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
- DAkkS 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	89145.00
	(with <i>internal</i> calibration)					
1003 0221	EG 220-3 NM	0.001	220	0.001	±0.002	109240.00

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

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	45940.00
1005 0200	440-33 N	0.01	200	±0.02	38065.00
1005 0400	440-35 N	0.01	400	±0.03	43315.00
1005 0401	440-43 N	0.1	400	±0.2	26585.00
1005 1000	440-45 N	0.1	1000	±0.2	35220.00
1005 2000	440-47 N	0.1	2000	±0.2	35440.00
1005 4001	440-49 N	0.1	4000	±0.3	43315.00
1005 4000	440-51 N	1.0	4000	±2	21000.00
1005 6000	440-53 N	1.0	6000	±2	25860.00

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	Linearity g	Maximum price/Pc. Rs.
1007 0200	EMB 200-2	0.01	200	-	-	17065.00
1007 0600	EMB 600-2	0.01	600	-	-	22315.00
1007 0500	EMB 500-1	0.1	500	-	-	7300.00
1007 1200	EMB 1200-1	0.1	1200	-	-	10370.00
1007 2200	EMB 2200-0	1	2200	-	-	7485.00
1007 5200	EMB 5.2K1	1	5200	-	-	8110.00
1007 5201	EMB 5.2K5	5	5200	-	-	7220.00
1000 0531	Mains adapter (YKA-03)					4460.00



## KERN TEE

Pocket balance

### Features :

- Small and handy
- Batteries (2 x1.5VAAA)  
Auto Off function after 3 minutes without change of load



## 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.
1014 0150	TEE 150-1	0.1	150	5905.00
1015 0060	CM 60-2N	0.01	60	11155.00
1015 0150	CM 150-1N	0.1	150	7220.00
1015 0320	CM 320-1N	0.1	320	7615.00
1015 1000	CM 1K1 N	1.0	1000	7220.00



## KERN ECB • EOB

Platform scales



Option



Option



### MODEL ECB

- Ideally suited for mobile use
- Battery operation (6 x 1.5V AA)
- Mains Adapter (Optional)
- Rechargeable battery pack optional, at extra cost
- Weighing plate size 318 x 258 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 2011	ECB 20K 2N	10	20	10	±40	16410.00
1008 5021	ECB 50K 2N	20	50	20	±80	16410.00
1009 3510	EOB 35K 10	10	35	10	±20	21850.00
1009 6020	EOB 60K 20	20	60	20	±40	21850.00



## 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	31625.00
1010 0106	FCB 6 K 0.5	0.5	6	0.5	±1.5	1.0	27310.00
1010 0112	FCB 12 K 1	1.0	12	1.0	±3.0	2.0	26585.00





## 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	9060.00
1017 0050	CH 50K 50	50	50	9975.00
1017 0051	CH 50K 100	100	50	8535.00
1018 0200	HCB 200K 500	500	200	13125.00



## 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 ).  
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	40245.00
1029 0200	PFB 200-3	0.001	200	0.001	± 0.003	Ø 80	41680.00
1029 0300	PFB 300-3	0.001	300	0.001	± 0.003	Ø 80	45990.00
1029 1200	PFB 1200-2	0.01	1200	0.01	± 0.03	Ø 120	35220.00





### 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 DAkkS certificate or locally with ERTL traceability, at extra cost.

#### Single weight Stainless Steel Class, E2

Cat. No.	Description	Price/Pc Rs.
1000 0535	1 g in box	8125.00
1000 0536	2 g in box	8565.00
1000 0537	5 g in box	9120.00
1000 0538	10 g in box	9400.00
1000 0539	20 g in box	10570.00
1000 0540	50 g in box	11900.00
1000 0541	100 g in box	12705.00
1000 0542	200 g in box	16060.00
1000 0543	500 g in box	26770.00
1000 0544	1 kg in box	38505.00
1000 0545	2 kg in box	61005.00
1000 0546	5 kg in box	87600.00
1000 0547	10 kg in box	136270.00
1000 0548	20 kg in box	313690.00
1000 0549	50 kg in box	652315.00

#### Single weight Stainless Steel, Class F1

Cat. No.	Description	Price/Pc Rs.
1000 0551	1 g in box	4725.00
1000 0552	2 g in box	4725.00
1000 0553	5 g in box	4855.00
1000 0554	10 g in box	5380.00
1000 0555	20 g in box	6040.00
1000 0556	50 g in box	6955.00
1000 0557	100 g in box	7615.00
1000 0558	200 g in box	10240.00
1000 0559	500 g in box	16275.00
1000 0560	1 kg in box	20620.00
1000 0561	2 kg in box	32025.00
1000 0562	5 kg in box	47790.00
1000 0563	10 kg in box	86890.00
1000 0564	20 kg in box	249375.00
1000 0565	50 kg in box	536815.00

#### Weight Set, Stainless Steel, in plastic carrying case, Class E2

Cat. No.	Description	Price/Set Rs.
1000 0571	Range 1 mg - 200 g	163310.00

#### Weight Set, Stainless Steel, in plastic carrying case, Class F1

Cat. No.	Description	Price/Set Rs.
1000 0581	Range 1 mg - 200 g	99750.00

**Note :** Weight boxes and weights in other ranges and class E1, E2, F1, F2, M1, M2 & M3 are also available. Details / Price on Request



# Certificate of Registration

*This is to certify that*

## **Aczet Pvt. Ltd.**

**Office: Unit No. E - 2, Plot No. - 15, WICEL Estate, Opp. Seepz Gate No. 1, Andheri (E),  
Mumbai - 400093, Maharashtra, India**

**Factories: # 7/8 Swagat Bldg, Sagar Plaza Indl Complex, Bhoidapada, Sativali Rd  
Vasai East - 401208, Maharashtra, India.**

**# Survey No.70, Hissa No. 4, Vill Bapane, Naigoan, Tal: Vasai, Dist:palghar,  
Maharashtra - 401208, India**

**# No. 211, Adore Aspire Bldg, Nr. BRTS, Gulbai Tekra, Panjarapole,  
Ahmedabad - 380015, Gujarat, India**

Has been assessed and certified by Optimum Certifications Inc.

As meeting the requirements of:

### **ISO 9001:2015**

### **Quality Management System**

For the following scope of activities:

**“Design Manufacturing, Supply & After Sale Service of Electronics Balance, Scales & Weigh Bridges, All Types Weighing Scales, Laboratory & Medical Instruments, Calibration Of Mass & Volume, Lab Instruments, Growth Monitoring Devices, Stadiometer, Infantometer, Xrf, Laser Marking Machine, Laser Welding Machine, Milk Analyser .”**

Date of Certification : 20<sup>th</sup> Jan. 2020

2<sup>nd</sup> Surveillance Due : 19<sup>th</sup> Jan. 2022

1<sup>st</sup> Surveillance Due : 19<sup>th</sup> Jan. 2021

Certificate Expiry Date : 19<sup>th</sup> Jan. 2023

(Subject to the company maintaining its system to the required standard)

**Certificate Number : Q/200120960**

Validity of this certificate can be verified at [www.ocicert.com](http://www.ocicert.com)



Director

**Optimum Certifications Inc.**

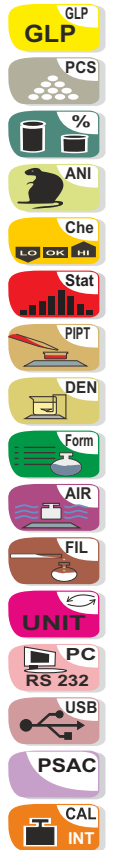
Validity of this Certificate is successful Annual Surveillance audits to be done. This certificate is the property of Optimum Certifications Inc. and shall be returned immediately upon request,

Optimum Certifications Inc. is Accredited by UKAF ([www.ukaf.org.uk](http://www.ukaf.org.uk))  
5 Jupiter House. Calleva Park, Aldermaston, Reading Berkshire RG78NN ,UK

# Semi Micro Balance CY-C Series



**aczel**



### Perfect self Auto Calibration

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs internal calibration.

### Incomparably fast

An outstanding feature is speed and stable readouts with five decimal places in just five seconds.

### Separate Measurement system

Balance have possibility of disconnecting the display unit from weighing chamber, which considerably reduces vibrations transferred to weighing chamber and in turns yield stable result.

### Brilliant readability

High contrast Graphical Display with backlit.

### Application

- Food
- Pharmaceuticals
- Institute
- Laboratory

### Incomparably stable accuracy

Repeatability of the weights measured is an additional strength, Rugged and high height MONOTECH sensor allows balance to give exceptionally stable result.

Model	CY 205C	CY 285C	CY 255C	CY 105C
Capacity	200 gm	80 / 220 gm	100 / 220 gm	100 gm
Readability	0.01 mg	0.01 / 0.1mg	0.01 / 0.1mg	0.01 mg
Repeatability (sd)	0.03 mg	0.02 / 0.1mg	0.03 / 0.1mg	0.02 mg
Linearity (+/-)	0.07 mg	0.04 / 0.2mg	0.05 / 0.2mg	0.04 mg
Min. Weight as per USP	20 mg	20 mg	20 mg	20 mg
Pan Size (mm / inch)	80 Ø / 3.15" Ø			
Response Time	5 - 8 Sec.			
Display	Alpha numeric LCD Backlite Dispaly with A.E.P.			
Calibration	Perfect Auto Internal Time & Temp Controlled Smart Calibration			
Units of measure	g, mg, ct, GN, mo, oz, dwt etc.			
Tare Range	Full Capacity			
Operating Temp.	18° to 30°C			
Protection	User Administration & Password Protection			
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)			
Interface	RS 232 or USB			
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing, Check Weighing Automatic Density, Determination, Formulation etc.			
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz			
Compliance	ISO, GLP / GMP USP Compliance			
Weighing Chamber (mm)	165 x 185 x 220			
Net Wt. / Gross Wt.	10.20kg / 14.70kg			
Housing Dim. (WxDxH) (mm)	212 x 340 x 340			
<b>Cat No.</b>	<b>1072 0205</b>	<b>1072 0285</b>	<b>1072 0255</b>	<b>1072 0105</b>
<b>Maximum Price Rs./Pc.</b>	284550.00	178500.00	315000.00	154350.00

# Analytical Balance

## CY-C Series



### PRINT FORMATS

22-Mar-17	11:13AM
Aczet	
Model	CY 224C
Ser. no.	9021107
Ver. no.	r0.1.04
ID	1234567
Calibration:	Internal
W-ID	.....
Temperature	29.378°C
Set	+ 200.0000g
Diff.	-0.0031g
Internal Cal Done	
Diff.	0.0000g
22-Mar-17	11:13AM
Name :	.....

### Application :

- Weighing
- Net / Total
- Check Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing



### Perfect Self Auto Calibration (PSAC)

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs Internal Calibration.

### Brilliant readability

High-contrast, backlit display is exceptionally easy to read under any room lighting conditions.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

Facility to input IDNR number for individual readings.

### RS 232C / USB

A bidirectional RS 232C data interface or USB makes communication with PC / Printer easier.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



Model	CY 304C	CY 224C	CY 124C	CY 64C
Capacity	300 gm	220 gm	120 gm	60 gm
Readability	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Repeatability (sd)	0.2 mg	0.1 mg	0.1 mg	0.1 mg
Linearity (+/-)	0.3 mg	0.2 mg	0.2 mg	0.2 mg
Pan Size (mm / inch)	90Ø / 3.5"Ø			
Response Time	2 - 3 Sec.			
Display	Alpha Numeric Backlite LCD Display			
Calibration	Motorised Internal Calibration			
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS			
Tare Range	Full			
Operating Temp.	15°C to 35°C			
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)			
Protection	User Administration & Password Protection			
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.			
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz			
Compliance	ISO, GLP / GMP USP Compliance			
Housing Dim. (WxDxH) mm	212 x 341 x 345			
Weight Approx	9.3 kg / 20 lb			
Cat No.	1060 0304	1060 0224	1060 0124	1060 0064
Maximum Price Rs./Pc.	125000.00	84000.00	83000.00	81000.00

# Analytical Balance

## CY Series



### PRINT FORMATS

22-Mar-17	11:13AM
Aczet	
Model	CY 224
Ser. no.	9021151
Ver. no.	r0.1.04
ID	1234567
Calibration:	External
W-ID	.....
Temperature	29.378°C
Set	+ 200.0000g
Diff.	-0.0031g
External Cal Done	
Diff.	0.0000g
22-Mar-17	11:13AM
Name :	.....



### Application :

- Weighing
- Net / Total
- Check Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Overload Protection

Capacity tracker built into display for easily monitoring possible overloads.

### Brilliant readability

High-contrast, backlit display is exceptionally easy to read under any room lighting conditions.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

Facility to input IDNR number for individual readings.

### RS 232C / USB

A bidirectional RS 232C data interface or USB makes communication with PC / Printer easier.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



Model	CY 304	CY 224	CY 124	CY 64
Capacity	300 gm	220 gm	120 gm	60 gm
Readability	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Repeatability (sd)	0.2 mg	0.1 mg	0.1 mg	0.1 mg
Linearity (+/-)	0.3 mg	0.2 mg	0.2 mg	0.2 mg
Pan Size (mm / inch)	90Ø / 3.5"Ø			
Response Time	2 - 3 Sec.			
Display	Alpha Numeric LCD Display			
Calibration	Automatic External Calibration			
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS			
Tare Range	Full			
Operating Temp.	15° to 35°C			
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)			
Protection	User Administration & Password Protection			
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.			
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz			
Compliance	ISO, GLP / GMP USP Compliance			
Housing Dim. (WxDxH) mm	212 x 341 x 345			
Weight Approx	9.3 kg / 20 lb			
Cat No.	1061 0304	1061 0224	1061 0124	1061 0064
Maximum Price Rs./Pc.	113000.00	73000.00	72000.00	68000.00

# Precision Balance

## CY Series



### PRINT FORMATS

22-Mar-2017	11:22AM
Aczet	
Model	CY 324
Ser. no.	9021124
Ver. no.	r0.0.04
ID	1234567
LID	7654321
nRef	50pcs
Nref	40.000 g
+	50 pcs
+	199.097 g
+	999.085 ct
+	50 pcs
22-Mar-2017	11:23AM
Name:	.....



Pan Size  
128 x 128 mm

Pan Size  
Dia. 110 mm

### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Analytical Wind Shield

Precision balance with analytical wind shield is an addition for accurate, reliable and

### IDNR

Facility to input IDNR number for individual readings.

### Brilliant readability

Bright backlit display with 15mm digits.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### RS 232C / USB

A bidirectional RS 232C data interface or USB makes communication with PC / Printer easier.

### Overload Protection

Capacity tracker built into display for easily monitoring possible overloads.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



22-Mar-2017	11:13AM
Aczet	
Model	CY 324
Ser. no.	9021124
Ver. no.	r0.1.04
ID	1234567
Calibration:	External
W-ID	.....
Temperature	29.378°C
Set	+ 200.000g
Diff.	-0.031g
External Cal Done	
Diff.	0.000g
22-Mar-2017	11:13AM
Name :	.....

Model	CY 123	CY 223	CY 323	CY 423	CY 513	CY 723	CY 1003	CY 2003
Capacity	120 gm	220 gm	320 gm	420 gm	510 gm	720 gm	1000 gm	2000 gm
Readability	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm
Repeatability (sd)	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.002 gm	0.003 gm
Linearity (+/-)	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.005 gm	0.005 gm
Pan Size (mm / inch)	Dia. 110 mm					128 x 128 / 5" x 5"		
Response Time	2 - 3 Sec.							
Display	Alpha Numeric LCD Backlite Display with A.E.P.							
Calibration	Automatic External Calibration							
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS							
Tare Range	Full							
Operating Temp.	10° to 40°C							
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)							
Protection	User Administration & Password Protection							
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.							
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz							
Compliance	ISO, GLP / GMP USP Compliance							
Housing Dim. (WxDxH) mm	212 x 342.5 x 341					212 x 342.5 x 271		
Weight Approx.	7.5 kg							
Cat No.	1062 0123	1062 0223	1062 0323	1062 0423	1062 0513	1062 0723	1062 1003	1062 2003
Maximum Price Rs./Pc.	34000.00	37000.00	40000.00	48000.00	50000.00	75000.00	98000.00	187000.00

# Precision Balance

## CY-C Series



### PRINT FORMATS

22-Mar-2017	11:22AM
Aczet	
Model	CY 324C
Ser. no.	9021124
Ver. no.	r0.1.04
ID	1234567
LID	7654321
nRef	50 pcs
Nref	40.000 g
+	50 pcs
+	199.097 g
+	999.085 ct
+	50 pcs
22-Mar-2017	11:23AM
Name:	.....



Pan Size  
128 x 128 mm

22-Mar-2017	11:13AM
Aczet	
Model	CY 324C
Ser. no.	9021124
Ver. no.	r0.1.04
ID	1234567
Calibration:	Internal
W-ID	.....
Temperature	29.378°C
Set	+ 200.000g
Diff.	-0.031g
Internal Cal Done	
Diff.	0.000g
22-Mar-2017	11:13AM
Name :	.....

### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Analytical Draft Shield

Precision balance with analytical draft shield is an addition for accurate, reliable and stable.

### Perfect Self Auto Calibration (In balance with suffix "C")

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs External Calibration.

### IDNR

Facility to input IDNR number for individual readings.

Pan Size  
Dia. 110 mm

### Brilliant readability

Bright backlit display with 15mm digits.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### RS 232C / USB

A bidirectional RS 232C data interface or USB makes communication with PC / Printer easier.

### Overload Protection

Capacity tracker built into display for easily monitoring possible overloads.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and C V (coefficient of variation).



Model	CY 123C	CY 223C	CY 323C	CY 423C	CY 513C	CY 723C	CY 1003C	CY 2003C
Capacity	120 gm	220 gm	320 gm	420 gm	510 gm	720 gm	1000 gm	2000 gm
Readability	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm
Repeatability (sd)	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.001 gm	0.002 gm	0.003 gm
Linearity (+/-)	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.002 gm	0.005 gm	0.005 gm
Pan Size (mm / inch)	Dia. 110 mm					128 x 128 / 5" x 5"		
Response Time	2 - 3 Sec.							
Display	Alpha Numeric LCD Backlite Display with A.E.P.							
Calibration	Motorised Internal Calibration							
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS							
Tare Range	Full							
Operating Temp.	10° to 40°C							
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)							
Protection	User Administration & Password Protection							
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.							
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz							
Compliance	ISO, GLP / GMP USP Compliance							
Housing Dim. (WxDxH) mm	212 x 342.5 x 341					212 x 342.5 x 271		
Weight Approx	7.5 kg							
Cat No.	1065 0123	1065 0223	1065 0323	1065 0423	1065 0513	1065 0723	1065 1003	1065 2003
Maximum Price Rs./Pc.	46000.00	48000.00	51000.00	59000.00	61000.00	86000.00	109000.00	210000.00



# Top Loading Precision Balance

## CY Series



# aczel

### PRINT FORMATS

24-Mar-2017	11:22AM
Aczet	
Model	CY 3102
Ser. no.	9021161
Ver. no.	r0.0.04
ID	1234567
LID	7654321
nRef	50pcs
Nref	40.00 g
+	50 pcs
+	1999.97 g
+	9999.85 ct
+	50 pcs
24-Mar-17	11:23AM
Name:	.....

22-Mar-17	11:13AM
Aczet	
Model	CY 3102
Ser. no.	9021161
Ver. no.	r0.1.04
ID	1234567
Calibration:	External
W-ID	.....
Temperature	29.378°C
Set	+ 2000.00g
Diff.	-0.31g
External Cal Done	
Diff.	0.00g
22-Mar-17	11:13AM
Name :	.....



**CY 612 only**

### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing



### Display

Bright Backlit LCD display with 15mm height.

### Fast results

Latest powerful microprocessor, shortens response time just 3sec.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

Facility to input IDNR number for individual readings.

### Winning technology

monotech technology, which ensures long-term high accuracy.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



Model	CY 612	CY 1202	CY 2202	CY 3102	CY 4102	CY 8102	CY 2202DR	
Capacity	600 gm	1200 gm	2200 gm	3100 gm	4100 gm	8100 gm	200 / 2100 gm	
Readability	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.001 / 0.01 gm	
Repeatability (sd)	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.002 / 0.02 gm	
Linearity (+/-)	0.02 gm	0.02 gm	0.02 gm	0.02 gm	0.02 gm	0.02 gm	0.003 / 0.03 gm	
Pan Size (mm / inch)	Ø 110	198 x 205 / 7.8" x 8.0"					128x128 / 5.1"x5.1"	
Response Time	2 - 3 Sec.							
Display	Alpha Numeric LCD Display							
Calibration	Automatic External Calibration							
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS							
Tare Range	Full Capacity							
Operating Temp.	15° to 35°C							
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)							
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.							
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz							
Compliance	ISO, GLP / GMP USP Compliance							
Housing Dim. (WxDxH) mm	212 x 342.5 x 89.5						212 x 342.5 x 271	
Weight Approx	5.5 kg							
Cat No.	1063 0612	1063 1202	1063 2202	1063 3102	1063 4102	1063 8102	1063 2212	
Maximum Price Rs./Pc.	30000.00	32000.00	34000.00	40000.00	48000.00	108000.00	51000.00	

# Top Loading Precision Balance

## CY-C Series



# aczel

### PRINT FORMATS

24-Mar-2017	11:22AM
Aczet	
Model	CY 3102C
Ser. no.	9021161
Ver. no.	r0.0.04
ID	1234567
LID	7654321
nRef	50pcs
Nref	40.00 g
+	50 pcs
+	1999.97 g
+	9999.85 ct
+	50 pcs
24-Mar-17	11:23AM
Name:	.....



**CY 612C only**

### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Display

Bright Backlit LCD display with 15mm height.

### Perfect Self Auto Calibration (In balance with suffix "C")

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs External Calibration.

### Brilliant readability

Bright backlit display with 15mm digits.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

Facility to input IDNR number for individual readings.

### RS 232C / USB

A bidirectional RS 232C data interface or USB makes communication with PC / Printer easier.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



22-Mar-17	11:13AM
Aczet	
Model	CY 3102C
Ser. no.	9021161
Ver. no.	r0.1.04
ID	1234567
Calibration:	Internal
W-ID	.....
Temperature	29.378°C
Set	+ 2000.00g
Diff.	-0.31g
Internal Cal Done	
Diff.	0.00g
22-Mar-17	11:13AM
Name :	.....

Model	CY 612C	CY 1202C	CY 2202C	CY 3102C	CY 4102C	CY 8102C
Capacity	600 gm	1200 gm	2200 gm	3100 gm	4100 gm	8100 gm
Readability	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm
Repeatability (sd)	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm	0.01 gm
Linearity (+/-)	0.02 gm	0.02 gm	0.02 gm	0.02 gm	0.02 gm	0.02 gm
Pan Size (mm / inch)	Ø 110	198 x 205 / 7.8" x 8.0"				
Response Time	2 - 3 Sec.					
Display	Alpha Numeric LCD Display					
Calibration	Motorised Internal Calibration					
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS					
Tare Range	Full					
Operating Temp.	15° to 35°C					
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)					
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.					
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz					
Compliance	ISO, GLP / GMP USP Compliance					
Housing Dim. (WxDxH) mm	212 x 342.5 x 89.5					
Weight Approx	5.5 kg					
Cat No.	1064 0612	1064 1202	1064 2202	1064 3102	1064 4102	1064 8102
Maximum Price Rs./Pc.	41000.00	43000.00	46000.00	51000.00	59000.00	119000.00

# Precision Balance CG Series



- Auto calibration with external weight.
- Easy to read LCD Display.
- Multifunction weighing units.
- Auto zero tracking, low battery for continues use.
- Overload protection design.
- S.S. Weighing Pan level indicator Quick weighing accurate result.

Model	CG 203L	CG 303L
Capacity	200 gm	300 gm
Readability	0.001 gm	0.001 gm
Repeatability (+/-)	0.001 gm	0.001 gm
Linearity (+/-)	0.002 gm	0.002 gm
Pan Size (mm/inc)	90 Ø	90 Ø
Cat No.	1067 0203	1067 0303
Maximum Price Rs./Pc.	24000.00	29000.00

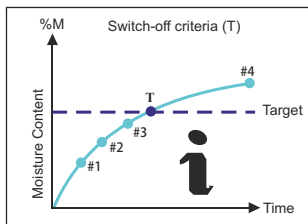
## Standard Features

- Compact and space saving.
- Large Stainless steel plate.
- Accurate to within  $\pm$  division at full load.
- Overload Protection.
- Dart Shield for more accurate reading.
- Standard RS 232 Interface for data output.
- LED 7 Digit Display for easy viewing.
- Standard dual side or External Display.
- Auto-Zero Tracking, Automatic External Calibration
- 8 Different weighing units such as g, ct, Tola etc.
- Piece Counting & Percentage Weighing Function
- With leveling bubble and adjustable feet for the stability of scale.
- Inbuilt rechargeable battery for continues use.
- AC or DC Power supply : Output AC/DC Adapter.



Model	CG 302	CG 602	CG 1202
Capacity	300 gm	600 gm	1200 gm
Readability	0.01 gm	0.01 gm	0.01 gm
Repeatability (sd)	$\pm$ 0.03 gm	$\pm$ 0.03 gm	$\pm$ 0.03 gm
Linearity (+/-)	0.01 gm	0.01 gm	0.01 gm
Pan Size (mm)	118 Ø		
Cat No.	1066 0302	1066 0602	1066 1202
Maximum Price Rs./Pc.	16000.00	18000.00	22000.00

# Moisture Analyzer MB Series



## Reliability

Reliable result depend on correct methodology. Select the in intelligent function, key in the reference value and maximum time. The MB swiftly calculates appropriate switch-off criteria automatically to match the reference value to the last decimal place. You can save this parameter as method. Intelligent efficiently develops your method and save your time in any area where different products are analyzed for their moisture content. You could never match your reference value with such accuracy.



## Ultra Fast uniform heating

Uniquely designed circular halogen lamp and reflectors ensures utmost rapid heating, shorten the measurement time well engineered heating chamber ensure uniform heating to achieve exact result with exceptional reproducibility.



## Brilliant Monotech sensor with analytical precision

The outstanding measurement performance of MB series is based on ACZET brilliant analytical weighing Technology MONOTECH. The forth decimal place is not displayed but is measured and used in calculation of highly precise results, gives highest measurement security.

with new Aczel Moisture Analyzer you can achieve higher productivity without compromising on quality in your daily business challenges, since it is DIVERSE and can be programmed according to the individual needs of the person. No matter if user is from quality assurance, manufacturing or R&D.

METHODWISE #01 BAEY FOOD	
STATISTICS	LAST RESULT 0.1800 GR
	LAST TIME 00:09 HR
	NO OF ANALY 1/50
	HEAT 5.6736 WHR
	STD. DEV. 0.0000
←BACK	↑UP ↓DOWN

## Statistics

This can display and print statistics for the last 9999 measurements based on each Method or Batch making this ideal intelligent instrument for R&D and Production both.

## Memory of each moisture Determination

This being the most versatile feature of Aczel MB Series, it stores last 1000 determination, so you can months, this make it Unique and DEPENDABLE, no other instrument can offer this.



## Password protection

Password protection prevents the unauthorized access to the stored data & alternations of the parameters thus ensuring its security.

## Data Storage

This unique feature offers the flexibility to choose the data storage mode as per user application.

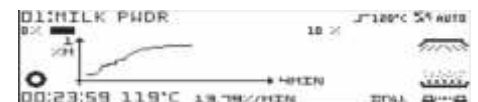


## Connectivity

Do you have to write down the measurement of several dozen samples each day Not any more thanks to the standard USB, RS 232 and ETHERNET interface, you can now conveniently transfer your data to your PC and continue working on it there, or print it out directly on ACZET print.

## Method Wise

Storage allows the user to store 25 moisture determination results in each method, user can store such 40 methods. method wise storage is suitable for application in r&D or Quality Assurance where there are more number of different product (Sample) to be analyzed.



## Graph

Tanks to graphical display, user can view auto updating graph of the drying process with the change in the moisture level.



Features like weight in assist and standby temperature helps user to improve reproducibility by taking same amount sample weight and similar climatic state for each moisture determination.

Temperature Calibration Report	
-----	
ACZET	
Model no.	MB 200
Serial no.	M2120057
Ver. no.	1.1.3.25
User ID	MAUSAM
Temp can count	13
Temp cal date	31/12/2011
Temp cal time	01:59PM
-----	
Temperature1	100°C:102°C
Temperature2	200°C:200°C
Temp Calibration done	
-----	
26/04/2014	06:20PM
Name :	.....
-----	

ABC PHARMA CO. LAB UNIT 3	
-----	
26/04/2014	05:30PM
ACZET	
Model no.	MB 200
Serial no.	M2120057
Ver. no.	1.1.3.25
User ID	MAUSAM
-----	
Method 19:	NACL
PRODUCTION LINE	
AFTER FILTERATION	
Start of analysis:	
Automatic	No
Stability	YES
Delay	YES
Heating	STANDARD
Temp	110°C
Sw-off	MANUAL
Stanby	OFF
Comile	OFF
Init. wt.	+3.918g
-----	
00:00:30hrs +	4.23 %M
00:01:00hrs +	3.08 %M
00:01:30hrs +	3.08 %M
00:02:00hrs +	3.46 %M
00:02:30hrs +	3.46 %M
-----	
Fn1. wt.	+4.794 g
00:00:16hrs +	0.13 %M
-----	
Last wt. cal	26/04/2012
Last temp cal	31/12/2011
Name :	.....
-----	
26/04/2014	05:32PM

### Batch wise

storage allows user to create 100 batches & store maximum 1000 data with no restriction on the data storage per batch. Batch wise storage is suitable for application in production where there are more numbers of samples to be analyzed for the same product.

Multiple units of measurement results %M, %D, %R (ratio), Gm/Lt, %M Atro, %D Atro, make it most convenient for each user.

Various heating profile like standard, Gentle, Rapid, Step & High temperature heating make's it possible to analyze any product sample.

Various switch off criteria from Auto, Manual, Timed, User Defined G/T, User Defined %U/T, Intelligent makes it possible to achieve utmost accurate result.

### ISO/GLP compliance printout

It helps identify how, when & who performed the moisture determination. Highly flexible user configurable print format with 4 user ID makes it customized yet traceable document in compliance to SOP's and GLP regulation making MB Series most acceptable in each industry. Every successful calibration is been tracked and record with incremental numbers also last successful calibration report stored in memory makes it even more flexible and convenient.

Model	MB 54	MB 40	MB 50	MB 120	MB 200
Max. Capacity	50 gm	40 gm	50 gm	120 gm	200 gm
Precision of readout mass	0.1 mg	1 mg	1 mg	1 mg	1 mg
Precision of readout of moisture	0.0001%	0.001%	0.001%	0.001%	0.001%
Repeatability (Sample 2g) (sd)	0.05%	0.1%	0.1%	0.1 %	0.1 %
Repeatability (Sample 10g) (sd)	0.02%	0.03%	0.03%	0.03%	0.03%
Display information	0.002%	0.002%	0.03%	0.03%	0.03%
Units of Measurements	%M, %D, %R (ratio), Gm/Lt, %M Atro, %D Atro				
Statistics	Method wise for each individual 40 methods or Batch wise for each individual 100 batches for last 999 results				
Technology	Infra Red Halogen				
Temperature Range	Max. to 175°C (Optional to 250°C) - P.O.R.				
Temperature Increment	Interval 1°C				
Heating Profile	Standard, Gentle, Rapid, Steps, High Temperature				
Switch off Criteria	Auto, Manual, User Def Weight / Time, User Def % unit / Time, Intelligent				
Auto Method Development	Intelligent				
Method Memory	40				
Batch Memory	100				
Method designation	Alpha Numeric				
Serial Number	Yes				
Compile	Yes (Method Linking)				
Temperature of work	15°C to 40°C				
Display	Graphical LCD Display with LED back				
Data Interface	RS 232C Bidirectional, USB, Ethernet, Ps2				
Print	GLP / GMP Compliant, User Configurable				
Password	Method, Setting, Print Format, Data Delet, Calibration, Drying				
Power Supply	230V / 50Hz or 115V / 60Hz				
Power Consumption (Watt)	Max 415				
Housing Dimension (WxDxH) mm	211 x 342 x 178				
Net Wt. / Grpss Wt.	7 Kg / 8 kg				
Packing Dimension (mm) (L x W x H)	400 x 340 x 300 / 15.8" x 13.4" x 11.9"				
<b>Cat No.</b>	<b>1042 0054</b>	<b>1042 0040</b>	<b>1042 0050</b>	<b>1042 0120</b>	<b>1042 0200</b>
<b>Maximum Price Rs./Pc.</b>	181000.00	108000.00	134000.00	147000.00	164000.00

# High Precision Balance

## CY Series



# aczel

### PRINT FORMATS

24-Mar-2017	11:22AM
Aczet	
Model	CY 3101
Ser. no.	9021102
Ver. no.	r0.0.04
ID	1234567
LID	7654321
nRef	50pcs
Nref	40.00 g
+	50 pcs
+	1999.97 g
+	9999.85 ct
+	50 pcs
24-Mar-17	11:23AM
Name:	.....

22-Mar-17	11:13AM
Aczet	
Model	CY 3101
Ser. no.	9021102
Ver. no.	r0.1.04
ID	1234567
Calibration:	External
W-ID	.....
Temperature	29.378°C
Set	+ 2000.0g
Diff.	-0.3g
External Cal Done	
Diff.	0.0g
22-Mar-17	11:13AM
Name :	.....



### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Display

Bright Backlit LCD display with 15mm height.

### Fast results

Latest powerful microprocessor, shortens response time just 3sec.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

Facility to input IDNR number for individual readings.

### Winning technology

monotech technology, which ensures long-term high accuracy.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).

Model	CY 3101	CY 4101	CY 6101	CY 8101	CY 10001
Capacity	3100 gm	4100 gm	6100 gm	8100 gm	10000 gm
Readability	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Repeatability (sd)	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Linearity (+/-)	0.2 gm	0.2 gm	0.2 gm	0.2 gm	0.2 gm
Pan Size (mm / inch)	198 x 205 / 7.8" x 8.0"				
Response Time	2 - 3 Sec.				
Display	Alpha Numeric LCD Display				
Calibration	Automatic External Calibration				
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS				
Tare Range	Full				
Operating Temp.	15° to 35°C				
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)				
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.				
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz				
Compliance	ISO, GLP / GMP USP Compliance				
Housing Dim. (WxDxH) mm	212 x 342.5 x 89.5				
Weight Approx	5.5 kg				
<b>Cat No.</b>	<b>1068 3101</b>	<b>1068 4101</b>	<b>1068 6101</b>	<b>1068 8101</b>	<b>1068 1000</b>
<b>Maximum Price Rs./Pc.</b>	35000.00	38000.00	40000.00	44000.00	51000.00

# High Precision Balance

## CY-C Series



### PRINT FORMATS

24-Mar-2017	11:22AM
Aczet	
Model	CY 3101
Ser. no.	9021102
Ver. no.	r0.0.04
ID	1234567
LID	7654321
nRef	50pcs
Nref	40.00 g
+	50 pcs
+	1999.97 g
+	9999.85 ct
+	50 pcs
24-Mar-17	11:23AM
Name:	.....

22-Mar-17	11:13AM
Aczet	
Model	CY 3101
Ser. no.	9021102
Ver. no.	r0.1.04
ID	1234567
Calibration:	Internal
W-ID	.....
Temperature	29.378°C
Set	+ 2000.0g
Diff.	-0.3g
Internal Cal Done	
Diff.	0.0g
22-Mar-17	11:13AM
Name :	.....



### Application :

- Weighing
- Net / Total
- Check Weighing
- Percentage Weighing
- Weight accumulation
- Piece counting
- Animal Weighing
- Dynamic Weighing
- Density determination
- Below balance weighing

### Display

Bright Backlit LCD display with 15mm height.

### Perfect Self Auto Calibration (In balance with suffix "C")

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs External Calibration.

### Fast results

Latest powerful microprocessor, shortens response time just 3sec.

### GLP

Built-in clock make all your documents ISO / GLP / USP compliance.

### IDNR

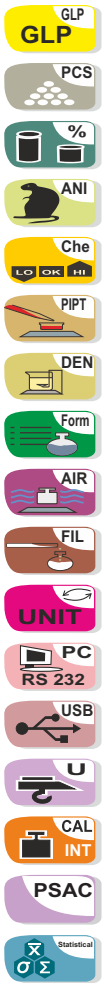
Facility to input IDNR number for individual readings.

### Winning technology

monotech technology, which ensures long-term high accuracy.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).



Model	CY 3101C	CY 4101C	CY 6101C	CY 8101C	CY 10001C
Capacity	3100 gm	4100 gm	6100 gm	8100 gm	10000 gm
Readability	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Repeatability (sd)	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Linearity (+/-)	0.2 gm	0.2 gm	0.2 gm	0.2 gm	0.2 gm
Pan Size (mm / inch)	198 x 205 / 7.8" x 8.0"				
Response Time	2 - 3 Sec.				
Display	Alpha Numeric LCD Display				
Calibration	Motorised Internal Calibration				
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS				
Tare Range	Full				
Operating Temp.	15° to 35°C				
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)				
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.				
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz				
Compliance	ISO, GLP / GMP USP Compliance				
Housing Dim. (WxDxH) mm	212 x 342.5 x 89.5				
Weight Approx	5.5 kg				
<b>Cat No.</b>	<b>1069 3101</b>	<b>1069 4101</b>	<b>1069 6101</b>	<b>1069 8101</b>	<b>1069 1000</b>
<b>Maximum Price Rs./Pc.</b>	47000.00	49000.00	51000.00	56000.00	63000.00

# Industrial Precision Balance

## CY-HC / CY-H Series



### Perfect Self Auto Calibration (In balance with suffix "C")

When the ambient temperature changes by a specific value or once a defined time interval has elapsed, it performs External Calibration.

### GLP

Built in clock make all your documents ISO / GLP compliance.

### USB

Optional USB interface instead of RS 232C interface can be ordered.

### Brilliant readability

Bright Backlit display with its 15-mm digits are plain to see, under any lighting conditions.

Bidirectional RS-232C data interface is another standard feature.

### Winning technology

Monotech technology, which ensures long-term high accuracy.

### Fast results

Latest powerful microprocessor technology, shortening response time for faster results, typical response time is just 3 seconds.

### Optional

External Battery Backup.

### Statistical Calculation Function

The balance display and / or output statistical calculation data as No. (number of data), SUM (total), MAX (maximum), MIN (minimum), R [range (maximum - minimum)], AVE (average), SD (standard deviation) and CV (coefficient of variation).

### Application

- Below balance weighing
- Piece counting
- Percent Weighing
- Check Weighing
- Density Calculation



Model	CY 15001HC	CY 25001HC	CY 35001HC	CY 15001H	CY 25001H	CY 35001H
Capacity	15 kg	25 kg	35 kg	15 kg	25 kg	35 kg
Readability	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Repeatability (sd)	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm	0.1 gm
Linearity (+/-)	0.2 gm	0.2 gm	0.2 gm	0.2 gm	0.2 gm	0.2 gm
Pan Size (mm / inch)	400 x 300 / 15.7" x 11.8"					
Response Time	2 - 3 Sec.					
Display	Alpha Numerical LCD Backlite Display with A.E.P.					
Calibration	Motorised Internal Calibration			Automatic External Calibration		
Units of measure	gm, mg, ct, GN, mo, oz, dwt, mom, Bat, MS					
Tare Range	Full					
Operating Temp.	15°C to 35°C					
Sensitivity Drift.	± 2ppm (2 x 10 <sup>-6</sup> / °C)					
Protection	User Administration & Password Protection.					
Application Modes	PCS, % Weighing, Animal / Dynamic Weighing Check Weighing, Automatic Density, Determination, Formulation Automatic Statistic Calculator etc.					
Power Supply	A/C Adaptor 230V or 115V / +/-20% 50-60Hz					
Compliance	ISO, GLP / GMP USP Compliance					
Housing Dim. (WxDxH)	517 x 302 x 130					
Weight Approx	15 kg					
Cat No.	1070 1500	1070 2500	1070 3500	1071 1500	1071 2500	1071 3500
Maximum Price Rs./Pc.	135000.00	155000.00	175000.00	107000.00	127000.00	175000.00



## Optional Accessories



### Features of Data Printer :

- ACZET's STATISTICAL PRINTER is ideal for routine laboratory application.
- GLP / GMP conform documentation of your results.
- Dot Matrix Printer, provides easily readable records on normal paper.
- Complete documentation of all data including calibration, weighing results, correct date and time information even after power failure.
- Date, Time, Statistic and Totalization functions
- Width : 57.5 ± 0.5mm Core Diameter : 8mm Min.
- Baud Rate : 1200, 2400, 4800, 9600, 19200

Cat No.	Model	Maximum Price Rs./Pc.
1046 0000	CPR 02	46060.00



### Density Kit Set :

Cat No.	Model	Maximum Price Rs./Pc.
1047 0000	CDK 01	33240.00



### Temperature Sensor :

Cat No.	Model	Range °C	Maximum Price Rs./Pc.
1048 0000	CTK - X01	30-200	24700.00



### Aluminum Dish

Cat No.	Model	Dia mm	Qty per Pack	Maximum Price Rs./Pack
1049 0000	LBA - X25	90	40	7800.00



### Battery Back-up unit

Cat No.	Model	Maximum Price Rs./Pc.
1050 0000	LBA - X01	9100.00

**IQ, OQ, PQ documents**

**Price on Request**

## Standard Test Weights



### Single Weights, E2 Class of Accuracy

Cat No.	Description	Maximum Price Rs./Pc.
<b>1052</b> 0018	500 g with NABL Calibration Certificate	39150.00
<b>1052</b> 0019	1 kg with NABL Calibration Certificate	47850.00
<b>1052</b> 0020	2 kg with NABL Calibration Certificate	58000.00
<b>1052</b> 0021	5 kg with NABL Calibration Certificate	88450.00

### Weight Box, E2 Class Accuracy

Cat No.	Description	Qty	Maximum Price Rs./Pc.
<b>1056</b> 0001	Standard Calibration weight Set in box, E2 Class Accuracy, 1 mg to 200 g with NABL Calibration Certificate	1	134125.00
<b>1056</b> 1001	Standard Calibration weight Set in box, E2 Class Accuracy, 1 mg to 500 mg with NABL Calibration Certificate	1	71920.00



### Single Weights, F1 Class of Accuracy

Cat No.	Description	Maximum Price Rs./Pc.
<b>1053</b> 0018	500 g with NABL Calibration Certificate	7975.00
<b>1053</b> 0019	1 kg with NABL Calibration Certificate	8700.00
<b>1053</b> 0020	2 kg with NABL Calibration Certificate	11600.00
<b>1053</b> 0021	5 kg with NABL Calibration Certificate	20300.00

### Weight Box, F1 Class Accuracy

Cat No.	Description	Qty	Maximum Price Rs./Pc.
<b>1058</b> 0001	Standard Calibration weight Set in box, F1 Class Accuracy, 1 mg to 200 g with NABL Calibration Certificate	1	46400.00
<b>1058</b> 1001	Standard Calibration weight Set in box, F1 Class Accuracy, 1 mg to 500 mg with NABL Calibration Certificate	1	26825.00

## Features :

- Powerful Servo DC motor for speed under varying load
- Stirring speeds fro 200 - 2200 RPM allows easy stirring of even highly viscous liquids
- Maximum temperature upto 550°C from room temperature, Accuracy:  $\pm 1^\circ\text{C}$
- Timer range: 1 to 999 min. and infinite mode
- 6 intelligent heating modes to suite your precision requirements
- Auto Restart Mode: Restarts the hotplate after power is restored with same parameters
- Capacity upto 20L suitable for large batches of samples
- Robust nanocrystalline ceramic heating plate offers high resistance to chemical & temperature shocks
- Isolated electric components with a safe drain channel for accidental spillage
- Safe temperature setting upto 575 °C to prevent temperature to raise beyond set limits irrespective of situation
- Keypad lock to prevent accidental changes of parameters
- Option of selecting temperature units: °C/°F
- Dedicated Display for both Set & Actual Temperature
- PT-1000 temperature sensor generates error codes pertaining to it's contact with the media
- Option to select Plate or Probe Temperature Display
- Pulse mode for thorough stirring of media by changing the direction of stirring



Specifications	iStir HP 550 - Prime
Motor Type	Servo DC Motor
Number of Stirring positions	1
Stirring Quantity	20 L (Max.) H <sub>2</sub> O
Stirring Bar Length	25 mm (Max.)
Power Consumption	1250 W
Heating Temperature Range	Room Temperature to 550°C
Speed Control	10 RPM/Step
Set-up Pate Material	Ceramic
Housing Material	Aluminum Alloy
Protection Class	IP21
Timer Advances Series	1 min to 999 min & infinite mode
Programmable Pulse	30 to 99 Sec.
Set-up Plate Dimensions	180X180 mm
Unit Dimensions	330 x 225 x 113 mm
Weight	4.9 kg

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3004 300	HS20 - 1001	Hot Plate Magnetic Stirrer – 220V, Max Temp. 550°C	45860.00

### Features :

- DC Motor for better performance
- Safe Temperature setting upto 345°C
- Variable speed from 200-2200 RPM
- Variable timer from 1 to 999 min. and infinite mode
- Microprocessor controlled
- Variable temperature setting from room temperature to 320°C, Accuracy:  $\pm 1\%$
- Large clear display
- Power intermittent mode: Auto restart mode after power restores for remaining operation
- Option of selecting temperature units: °C/ °F
- Spacing saving design/ small footprint
- Separate display for speed & temperature/time
- PT-1000 temperature probe
- Option of selecting plate material while placing order



Specifications	iStir HP 320
Capacity	10L (max.) H <sub>2</sub> O
Power Consumption	650 W
Heater Temperature	Ambient to 320°C
Variable Speed	200 to 2200 RPM in steps of 10 RPM
Run Time	1 to 999 min. & infinite
Set-up Plate Dimensions	140 mm (5 inches)
Set-up Plate Material	Ceramic Coated SS
Housing Material	ABS Plastic
Weight	2.2 kg
Dimensions	156 X 248 X 148 mm
Protection Class	IP21

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3004 001	HS20-3212	Hotplate Magnetic Stirrer, Max Temperature 320°C with Ceramic Coated SS top	32415.00

### Features :

- Electric break for immediate stopping of device from opening the lid
- Highly durable robust construction
- Intelligent design to provide carbon dust insulation and safe drainage provision
- Compact design to save valuable space & can be used in fume hoods & cold rooms
- Speed of 6000 RPM for enhanced performance
- Speed accuracy of  $\pm 100$  RPM
- Closed rotor design for sample protection



Specifications	iFuge M08
Rotor Capacity	8 place closed rotor for 1.5/2.0 ml microtubes
Speed (RPM)	6000
Speed RCF (g)	2000
Digital Display	No
Electronic Safety breaks	Yes
Noise Level	< 55 db
Power Supply	220VAC, 50Hz
Power Consumption	15 W
Dimensions	162 X 157 X 115 mm

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3012 1000	M08-1212	Micro Centrifuge, fix speed of 6000 RPM	10220.00

## Features :

- No Moving parts -truly maintenance free
- Low aspect ratio (just 13/14 mm thick)
- Software driven gradual acceleration
- Microprocessor controlled with last run memory feature
- Pulse mode-reverses the direction every 30 seconds for proper mixing
- Universal power supply –small wall mount power adapter
- IP 65 compliant design (water spill resistant)
- Corrosion resistant SS top surface to fight harsh chemicals
- Synchronized speed setting (Multi-position)



Specifications	iStir UNO	iStir Quattro
Max RPM	1500	1200
Max Setting	From 15 RPM to every 50 RPM	
Capacity ml (H <sub>2</sub> O)	1 X 800	4 x 400
Time setting	1 to 99 min	
Digital Display	Yes	
Recommended bar length mm	25	
Pulse function	Yes	
Sync Mode	NA	Yes
Lat run memory	Yes	
Dimensions (W x D x H) in mm	124 x 191 x 14.5	457 x 126 x 13.4
Power Consumption	5 W	13 W
Weight	400 gm	1.5 Kg
Protection class	IP 65 compliant design (water spill resistant)	

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3006 100	MS01-1111	Motor less ultra slim single position magnetic stirrer with 1500 RPM	12980.00
3006 200	MS01-4110	Motor less ultra slim 4 position magnetic stirrer with 1200 RPM	27190.00

### Optional Accessories

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3006 000	SB25	Magnetic bar (L X D) 25x 8 mm	300.00

## Features : (Mini Vortex Mixers)

- Tiny Vortex with small footprint
- BLDC motor for maintenance free long life
- Smart & robust design- Press activation & suspension
- Robust construction with dia cast aluminum base and rubber pads for stable & salient operation



## Features : (Vortex Mixers)

- Brushless DC motor fitted with ball bearing for efficient noiseless operation
- Adjustable speed range with accuracy of  $\pm 5\%$
- Time setting 0 to 999 min (iSwix VT)
- Programmable pulse mode function (iSwix VT)
- 3-way switch for touch, continuous & stand-by mode
- Visual indication marker for max speed applicable for various attachments

Specifications	iSwix Jr	iSwix Jr VT	iSwix	iSwix VT
Max RPM	4500		2800	4200
Orbital diameter mm	4.5		4.0	
Motor type	BLDC		AC Synchronous	BLDC
Digital Display	No		No	Yes
Max Load Capacity gm	100		500	
Max tube diameter	30 mm test tube		Optional Tubes adapters available	
Press activation	Yes		3 way switch	
Speed setting	No	Yes	Yes	
Time setting	No		No	Yes
Dimensions (W x D x H) in mm	100 x 100 x 70		205 x 136 x 138.5	
Power supply	24 VDC		220 VAC, 50 Hz	24 VDC
Power Consumption	14 W		20 W	
Weight	0.5 kg		3 kg	

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3003 100	iSwix Jr	Analog tiny vortex mixer with fixed speed	10890.00
3004 100	iSwix Jr VT	Analog tiny vortex mixer with variable speed	11355.00
3003 200	iSwix	Analog vortex mixer with variable speed, 230 VAC operated	12490.00
3004 200	iSwix VT	Digital vortex mixer with variable speed & time	17565.00

### Optional Accessories

Cat No.	Product Code	Description	Maximum Price Rs. / Pc.
3005 001	VM-A1	Universal Attachment	1160.00
3005 002	VM-A3	Micro plate attachment for iSwix/iSwix VT Vortex Mixer	1160.00
3005 003	VM-A4	Flask attachment for iSwix/iSwix VT Vortex Mixer	1160.00
3005 004	VM-A2	Micro Centrifuge Tubes attachment for iSwix/iSwix VT Vortex Mixer	1620.00
3005 005	VM-A6	Round Disc for for iSwix/iSwix VT Vortex Mixer	1620.00

## Digital Overhead Stirrer, Rivotek

Overhead stirrer is suitable for mixture of high viscosity liquid or solid-liquid. Widely used in chemical synthesis, pharmaceutical, physical and chemical analysis, petrochemical, cosmetics, health care, food, biotechnology and other fields.

### Features :

- High reliability, long continuous service, outstanding performance
- Cover the speed range from 0 to 2200 RPM, the speed is accurate and controlled
- Brushless DC motor drive, low noise and maintenance free
- LCD displays actual speed
- Overload protection, motor would automatically stop in case of continuous overload

Specifications	
Max. Stirring Volume of H <sub>2</sub> O (Ltrs)	40
Power (W)	130
Voltage (VAC), Frequency (Hz)	230, 50
Speed range (RPM)	50-2200
Speed Display	LCD
Speed display resolution (RPM)	±1
Max torque (Ncm)	60
Viscosity max (mPas)	50000
Chuck range diameter (mm)	0.5-10
Dimensions (WxHxD mm)	83x220x186
Weight (kg)	2.8
Protection class	IP42
Working temperature (°C)	5-40
Permissible Humidity (%)	80



Cat No.	Description	Maximum Price Rs. / Pc.
3001 040	Overhead Stirrer with LCD display, Max Stirring Volume 40 Ltrs, including Universal plate stand & crossed stirrer, shaft length 40 cm, stirrer diameter 5 cm	50000.00

\* Available till stocks last

## DIAPHRAGM TYPE COMPRESSORS CUM VACUUM PUMPS



7001 0001 / 1001



7001 0002 / 1002



7001 0004 / 1004



7001 0006 / 1006



7001 0007



7001 0008



7001 0009 / 1009



7001 0010 / 1010



7001 0012 / 1012



21202 500 / 1500

### 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)

### 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.

### 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.





**Portable, Oil-free vacuum pumps**

Cat No.	Features	Max Flow LPM	Max Press. PSIG	Max. Vac. Inch Hg	Approx. Weight kg	Motor HP	Approx. Dimensions mm	Maximum Price Rs/Pc
7001 0001	Single stage &	15	25	22	2.7	1/20	175 x 110 x 140	9665.00
7001 0002	Single stage & reduced dimensions	15	25	22	2.5	1/20	150 x 110 x 140	9665.00
7001 0004	Double stage in parallel	25	25	22	4.2	1/16	220 x 120 x 140	12555.00
7001 0006	Single stage	45	40	22	6.2	1/8	220 x 120 x 180	14525.00
7001 0007	Chemical resistive Parts	30	10	22	5.8	1/8	235 x 155 x 200	16750.00
7001 0008	Chemical resistive Parts	50	10	22	8.7	1/4	325 x 155 x 200	23620.00
7001 0009	Double stage in series	45	60	27	9.0	1/4	290 x 120 x 180	18720.00
7001 0010	Double stage in parallel	75	40	22	9.0	1/4	290 x 120 x 180	18720.00
7001 0012	Flame Proof Motor	45	35	22	18.0	1/4 (FPM)*	325 x 150 x 250	33495.00
21202 500	Double stage with VGR	15	35	27	4.1	1/16	220 x 110 x 140	13850.00

**Portable Vacuum Pumps Oil-Free Air Compressors with Teflon Diaphragm**

Cat No.	Max Flow LPM	Max Press. PSIG	Max. Vac. Inch Hg	Approx. Weight kg	Motor HP	Approx. Dimensions mm	Maximum Price Rs/Pc
7001 1001	15	25	22	2.7	1/20	175 x 110 x 140	13610.00
7001 1002	15	25	22	2.5	1/20	150 x 110 x 140	13610.00
7001 1004	25	25	22	4.2	1/16	220 x 120 x 140	16530.00
7001 1006	45	40	22	6.2	1/8	220 x 120 x 180	18515.00
7001 1009	45	60	27	9.0	1/4	290 x 120 x 180	22895.00
7001 1010	75	40	22	9.0	1/4	290 x 120 x 180	22895.00
7001 1012	45	35	22	18.0	1/4 (FPM)*	325 x 150 x 250	37200.00
21202 1500	15	35	27	4.1	1/16	220 x 110 x 140	17830.00

**Optional Accessories**

Cat No.	Description	Maximum Price Rs/Pc
7001 0513	Vacuum gauge and regulator	1310.00
7001 0514	Pressure gauge and regulator	1310.00
7001 0519	Moisture trap	2320.00

## 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	Cover	No. of Rack	Maximum Price Rs/Pc
50121 001	Amb. to 95 °C	300 x 175 x 160	SS Gabled	2	35650.00
50121 002	Amb. to 95 °C	350 x 300 x 160	SS Flat	Not provided	37985.00

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	21350.00



### 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	35450.00
50121 0025	Amb. to 95 °C	350 x 300 x 160	SS Flat	Provided	40390.00



### Constant Temperature Water Bath, Rivotek

Double walled construction. The gap between the two walls filled with glass wool insulation. Heating is by immersion type heaters. Lid made of Stainless Steel.

#### Specifications

- **Digital display** — With PID Controller by using PT 100 sensor, accuracy:  $\pm 0.5$  °C
- **Temperature Range** — (Ambient +5) to 95.0 °C
- **Temperature distribution system** — A Circulator pump is mounted for temperature. Uniformity inside the bath.
- **Safety controls** — Digital safety controller is provided to avoid Overshoot Temperature.
- **Mains Power** — Works on 230 V AC single phase 50Hz.

Cat No.	Chamber Size in inches	Chamber Size L x D x H in mm	Rating Watt	Volume in ltrs.	Inner Chamber	Outer Chamber	Maximum Price Rs/Pc
50121 018	18"x12"x10"	460 x 305 x 255	1.5K.W.	18.0	S.S.304	MS Powder coated	81255.00
50121 027	22"x12"x10"	560 x 305 x 255	2.0K.W.	27.0	S.S.304	MS Powder coated	83335.00
50121 047	26"x14"x12"	660 x 355 x 305	2.5K.W.	47.0	S.S.304	MS Powder coated	85405.00
50122 018	18"x12"x10"	460 x 305 x 255	1.5K.W.	18.0	S.S.304	S.S.304	87880.00
50122 027	22"x12"x10"	560 x 305 x 255	2.0K.W.	27.0	S.S.304	S.S.304	94055.00
50122 047	26"x14"x12"	660 x 355 x 305	2.5K.W.	47.0	S.S.304	S.S.304	115695.00

### Oil Bath, Rivotek

Bath Material - SS 304, 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  $\pm 1.0^{\circ}\text{C}$   
 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	19780.00
50131 002	2	205 x 115	21325.00
50131 003	3	225 x 130	22490.00
50131 004	5	270 x 155	24680.00
50131 005	10	335 x 190	28380.00
50131 006	20	400 x 220	31210.00

### HEATING BLOCK

#### Heating Block, Rivotek

The body made of MS Powder coated.  
 Temperature range ambient to 100 °C controlled to  $\pm 1.0^{\circ}\text{C}$  by  
 digital display with microprocessor based PID Controller display using  
 PT 100 as sensor.



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.	23610.00
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.	23610.00
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.	23610.00
50031 005	Single Heating Block with 150 x 75 x 50mm size accommodating 50 tubes of 10mm Dia. for LAL test	23610.00
50031 002	Single Heating Block with 150 x 100 x 50mm size accommodating 60 tubes of 10mm Dia. for LAL test	26290.00

**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	11265.00
50020 0009	9	1.5	16365.00
50020 0012	12	2.0	20550.00





**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	14220.00
50021 1016	10 x 16	1.2	18315.00
50021 1218	12 x 18	2.0	20550.00
50021 1824	18 x 24	3.0	35220.00

### HEATING MANTLES & EXTRACTION (KJELDAHL) APPARATUS



**Heating Mantles, Rivotek :** MS powder coated Aluminium metal body up to 20 ltrs., MS body for 50, 100 & 200 ltrs. with energy regulator, switch and indicating lamp, max temp (approx. 400 °C).

Cat No.	Model	Capacity ml	Watts	Voltage	Maximum Price Rs/Pc
9000 0002	Heating Mantles with Energy Regulator	100	60	230	2445.00
9000 0003	Heating Mantles with Energy Regulator	250	85	230	2795.00
9000 0004	Heating Mantles with Energy Regulator	500	150	230	3185.00
9000 0005	Heating Mantles with Energy Regulator	1,000	200	230	3500.00
9000 0006	Heating Mantles with Energy Regulator	2,000	300	230	3640.00
9000 0007	Heating Mantles with Energy Regulator	3,000	450	230	4195.00
9000 0008	Heating Mantles with Energy Regulator	5,000	2 x 300	230	5085.00
9000 0009	Heating Mantles with Energy Regulator	10,000	2 x 600	230	7745.00
9000 0010	Heating Mantles with Energy Regulator	20,000	3 x 665	230	10735.00

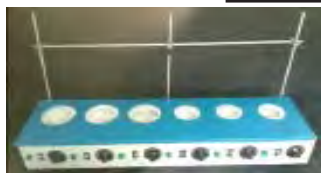


#### Heating Mantles (Digital), Rivotek :

Construction of these laboratory heating mantles are similar to standard heating mantle but the temperature is controlled by digital temperature controller. Temperature range Ambient +5 to 400 °C

These laboratory heating mantles are designed to take only one size of flask. Various sizes are available to fit around bottom flasks of capacity from 1000 ml to 5000 ml. The snug fit of the heating surface, which is in close contact with the flask, ensures good thermal efficiency.

Cat No.	Model	Capacity ml	Watts	Maximum Price Rs/Pc
9100 0005	Heating Mantles - Digital	1000	200	28975.00
9100 0006	Heating Mantles - Digital	2000	300	30855.00
9100 0007	Heating Mantles - Digital	3000	450	34475.00
9100 0008	Heating Mantles - Digital	5000	2 x 300	37290.00



#### Extraction and Kjeldahl Apparatus for research laboratories, Rivotek

MS powder coated. Available with 4 & 6 heaters with energy regulator control, max temp (approx. 400 °C).

Cat No.	Capacity ml	No. of Controls	Watts	Maximum Price Rs/Pc
9001 0001	100	4	400	12875.00
9001 0002	250	4	600	14085.00
9001 0003	500	4	800	14620.00
9001 0004	1000	4	1200	16230.00
9001 0006	100	6	600	17040.00
9001 0007	250	6	900	17305.00
9001 0008	500	6	1200	18645.00
9001 0009	1000	6	1800	23340.00

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**Optional Accesories for Extraction and Kjeldahl Apparatus, Rivotek**


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Cat No.	Description	Maximum Price Rs/Pc
9002 0001	Finger Clamp with Boss Head	1690.00




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**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.	19330.00
50022 002	Test Tube Rotator with $\varnothing$ 16/19 mm Test tubes 12 Nos.	19330.00
50022 003	Test Tube Rotator with $\varnothing$ 30 mm Test tubes 8 Nos.	19330.00

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**Optional Accesories for Test Tube Rotator, RIVOTEK**


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Cat No.	Description	Maximum Price Rs/Pc
50022 501	Digital Timer (0 - 99 min)	10400.00
50022 502	Digital RPM	10400.00

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**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 (wihout load)



Cat No.	Description	Maximum Price Rs/Pc
50023 001	Universal Cell Mixer with 0.5 ml ( $\varnothing$ 8 mm) Eppendorf tubes 12 Nos.	16255.00
50023 002	Universal Cell Mixer with 1.5 ml ( $\varnothing$ 11 mm) Eppendorf tubes 12 Nos.	16255.00
50023 003	Universal Cell Mixer with $\varnothing$ 13 to 27 mm Test tubes 8 Nos.	16255.00

**BOD Incubator, Rivotek**

Specifications	BOD Incubator with PLC system	BOD Incubator with PID system
Outer Construction	MS Powder coated	
Inner Construction	SS 304	
Insulation	Double walled construction with 70mm thick 'PUF' insulation provided in between the walls to prevent loss of heat.	
Sample viewing	Inner Full Viewing glass door and Outer door insulated with lock and key arrangement	
Temperature Range	5 °C to 60 °C	
Accuracy	± 1.0 °C	
Temperature sensor	PT 100 RTD	
Temperature Safety	Safety Thermostat for Temperature overshoot	
Refrigeration	CFC free compressor utilizing R134a Eco-friendly refrigeration	
Control System	Fully controlled by Programmable Logic Controller (PLC)	Microprocessor based PID Control
Display Type	HMI-4.3" touch screen display	LED Display
Data Transfer	Provision of USB port to download data such as (Temperature, Date & Time.)	N.A.
Feet	Castor wheels	
Power Supply	230V/ 50 hz AC	



Cat No.	Capacity Ltrs./Cu. Ft.	Internal Dimensions W x D x H (mm)	Display	Shelf	Maximum Price Rs/Pc
50085 0045	45 x 1.5	350 x 350 x 390	HMI (Touch Screen)	2 Nos.	On Request
50085 1045	45 x 1.5	350 x 350 x 390	PID Controller	2 Nos.	On Request

**NOTE:** The 3 KVA Capacity, Servo Controlled Voltage Stabilizer is a must for the above B.O.D. Incubators. Price on Request.

### BOD Incubator Shaker, Rivotek

In order to provide optimal conditions for cell growth, some type of agitation or shaking is necessary to incorporate oxygen and evenly distribute nutrients throughout the culture media. That's often done by placing a separate shaker inside an incubator, but incubator shakers combine those functions for a more convenient and efficient setup. The incubator shaker can be used for growth of just about any kind of cell including bacterial cultures, tissue cultures, and yeast.

#### Specifications:

<b>Material of Construction:</b>	Interior cabinet- SS 304 & Exterior cabinet: MS powder coated.
<b>Insulation:</b>	Double walled construction with 70mm thick 'PUF' insulation provided in between the walls to prevent loss of heat.
<b>Display Control:</b>	Microprocessor based PID control of by using PT 100 Sensor.
<b>Temperature range:</b>	5 °C to 60 °C, Accuracy: $\pm 1.0^{\circ}\text{C}$
<b>Shaking Platform Size:</b>	For conical flask SS Platform size with 425 x 425 mm.
<b>Additional Steel Rod Tray:</b>	For Petri dishes and small beakers, size with 425 x 425 mm.
<b>Exceptional Uniformity:</b>	Motorized blower at back side of the chamber develops unique Air flow system which ensures maximum uniform temperature.
<b>Safety thermostat:</b>	Safety Thermostat provided to cut off heater above 70 °C.
<b>Observation:</b>	Transparent toughened glass door and outer door key lockable.
<b>Samples viewing:</b>	Built in lightning attachment with low wattage CFL Lamp provided with External switch on the front panel.
<b>Refrigeration:</b>	CFC free compressor utilizing R134a Eco-friendly refrigeration
<b>Feet:</b>	Castor wheels.
<b>Mains Power:</b>	Works on 230 V AC single phase 50Hz.



#### Special Features

<b>Motor:</b>	Brushless 3 phase Induction Motor, to operate 24 x 7 cycle.
<b>VFD Drive:</b>	VFD (Variable Frequency Drive) of 230 V, I Phase Input – III Phase output.
<b>RPM:</b>	50 to 200 RPM. (without Load Approximately)
<b>Volt Meter:</b>	With LCD Display for better view

Cat No.	Capacity Litres	Temp. Range °C	External Dimensions W x D x H (mm)	Internal Dimensions W x D x H (mm)	Maximum Price Rs/Pc
50084 125	125	5 °C to 60 °C	650 x 650 x 1300	500 x 500 x 500	On Request

**NOTE:** The 3 KVA Capacity, Servo Controlled Voltage Stabilizer is a must for the above B.O.D. Incubators. Price on Request.

Spring Loaded SS Clamps (removable) for Incubator Shaker: **OPTIONAL**

(To be ordered separately as per the user's requirement)

Cat No.	Flask Capacity ml	No. of SS lotus clamps required for tray size 425 x 425 mm	Maximum Price Rs/Pc
50081 501	50	25	235.00
50081 502	100	25	245.00
50081 503	250	16	260.00
50081 504	500	16	345.00
50081 505	1000	8	485.00



### Incubator Shaker (RT-PLUS) - STD Model, Rivotek

#### Specifications:

- Outer Construction** : MS powder coated.
- Inner Construction** : SS 304
- Samples viewing** : Transparent Glass window.
- Inbuilt Lighting** : Built in lighting attachment with low wattage provided with External Switch on the front panel.
- Shaking Platform Size** : For conical flask SS Platform size with 425 x 425 mm.
- Shaking speed** : 20-200 Orbital strokes per min. (without load)
- Additional SS Tray** : For Petri dishes and small beakers.
- Temperature range** : (5 °C above ambient) to 70 °C, Accuracy:  $\pm 0.5$  °C.
- Uniformity control** : Fitted with recirculation fan in the chamber for uniformity of temperature.
- Platform capacity** : As per the table chart given below for tray size suitable clamps capacity.
- Display Control** : Microprocessor based PID control by using PT 100 Sensor.
- Speed Indicator** : Digital Speed Indicator on the front panel.
- Mains Power** : Works on 230 V AC single phase 50Hz.

#### Special Features

- Motor** : Brushless 3 phase Induction Motor, specially design for 24 hrs cycle.
- VFD Drive** : VFD (Variable Frequency Drive) of 230 V, I Phase Input – III Phase Output.
- Amplitude** : 25 mm dia Orbital motion

Cat No.	Tray Size in mm	Inner Chamber Size in mm L x D x H	Outer Chamber Size in mm L x D x H	Heater Watts	Digital Speed Indication	Maximum Price Rs/Pc
50083 003	425 x 425	500 x 510 x 500	550 x 520 x 520	650	Yes	190875.00

Spring Loaded SS Clamps (removable) for Incubator Shaker: **OPTIONAL**  
(To be ordered separately as per the user's requirement)

Cat No.	Flask Capacity ml	No. of SS lotus clamps required for tray size		Maximum Price Rs/Pc
		425 x 425 mm		
50081 501	50	25		235.00
50081 502	100	25		245.00
50081 503	250	16		260.00
50081 504	500	16		345.00
50081 505	1000	4		485.00



### Microlab Incubator, Rivotek

- Exterior Material** : MS Powder coated.
- Interior Material** : SS 304
- Temperature Range** : Ambient +5 to 60 °C
- Temperature Controller** : Digital display with microprocessor based PID Controller with PT 100 sensor.
- Accuracy** :  $\pm 0.5$  °C.
- Samples viewing** : Transparent glass window cut out on front door of 1 Sq Ft
- In-built lighting** : Built-in LED lighting attachment provided with external switch on front panel.
- LCD Volt Meter** : For monitoring input AC voltage.
- Uniformity Control** : The recirculation fan fitted inside achieves uniformity of Temperature.
- Mains Power** : Works on 230 V AC single phase 50Hz.

Cat No.	Working Chamber size in mm	Heater Watt	Maximum Price Rs/Pc
50151 001	300 x 260 x 300	350	30165.00



## INCUBATORS & SHAKERS

### Incubator - Shakers, Rivotek

Temp. Range (Ambient +5) to 60°C

Digital display with microprocessor based PID Controller with PT 100 sensor and accuracy  $\pm 1^\circ\text{C}$ .

Fitted with re-circulation fan to maintain temperature uniformity.

The body material is MS powder coated; inner material is SS 304 ; Tray material is SS.

Drive mechanism is powered by Permanent Magnet Geared DC motor.

Continuous operation limit, maximum upto 10-12 hours



### 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.	270 x 255 x 100	1 mm dia. orbit	100 to 1500	31815.00

### Incubator with Orbital Shaker Mechanism, Rivotek

**Exterior Material** : MS Powder coated.

**Interior Material** : SS 304

**Temperature Range** : Ambient +5 to 60 °C

**Temperature Controller** : Digital display with microprocessor based PID Controller with PT 100 sensor.

**Accuracy** :  $\pm 0.5^\circ\text{C}$ .

**Samples viewing** : Transparent glass window cut out on front door of 1 Sq Ft

**In-built lighting** : Built-in LED lighting attachment provided with external switch on front panel.

**RPM Shaking speed** : 20 to 200 RPM without load.

**Uniformity Control** : The recirculation fan fitted inside achieves uniformity of Temperature.

**Mains Power** : Works on 230 V AC single phase 50Hz.



Cat No.	Tray size in mm	Chamber Size L x D x H in mm	Speed Indication	Stroke Length	Stroke Speed per min. (without load)	Maximum Price Rs/Pc
50082 001	325 x 325	400 x 425 x 450	No	25 mm dia.	20 to 200	55945.00
50082 002	325 x 325	400 x 425 x 450	Yes	25 mm dia.	20 to 200	83370.00
50082 003	425 x 425	500 x 525 x 500	No.	25 mm dia.	20 to 200	73130.00
50082 004	425 x 425	500 x 525 x 500	Yes	25 mm dia.	20 to 200	98205.00

*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

Continuous operation limit, maximum upto 10-12 hours



Cat No.	Tray size in mm	Digital Speed Indication	Maximum Price Rs/Pc
50081 001	325 x 325	No	22740.00
50081 002	425 x 425	No	39780.00
50081 003	325 x 325	Yes	39475.00
50081 004	425 x 425	Yes	52315.00

*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
- Continuous operation limit, maximum upto 10-12 hours

Cat No.	Tray size mm	Digital Speed Indication	Maximum Price Rs/Pc
50101 001	325 x 325	No	21655.00
50101 002	425 x 425	No	37885.00
50101 003	325 x 325	Yes	37600.00
50101 004	425 x 425	Yes	49825.00

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	750 x 750 mm	
50081 501	50	16	25	48	235.00
50081 502	100	16	25	48	245.00
50081 503	250	8	16	48	260.00
50081 504	500	8	16	25	345.00
50081 505	1000	4	4	16	485.00

### Optional Accesories for Orbital / Reciprocating Shaker, RIVOTEK

Cat No.	Description	Maximum Price Rs/Pc
50022 501	Digital Timer (0 - 99 min)	10630.00



### 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.
- Continuous operation limit, maximum upto 10-12 hours

Cat No.	Type	Tank size L x D x H in mm	Tray size L x D x H in mm	Stroke Speed per min.	Maximum Price Rs/Pc
50111 001	Reciprocating (Horizontal)	370 x 300 x 200	250 x 250 x 110	10 -100	59510.00
50111 002	Reciprocating (Horizontal)	470 x 350 x 200	350 x 300 x 110	10 -100	71650.00
50111 003	Orbital	450 x 425 x 200	325 x 325	20 -200	79940.00

Note: SS Lotus clamps for holding the flasks in the above shakers to be ordered separately (listed next page)

### 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 300 mm	
50081 501	50	9	16	20	235.00
50081 502	100	9	16	20	245.00
50081 503	250	5	8	9	260.00
50081 504	500	4	8	6	345.00
50081 505	1000	-	4	-	485.00

### Optional Accesories for Water Bath, RIVOTEK

Cat No.	Description	Maximum Price Rs/Pc
50022 503	Digital Safety Controller	10400.00
50022 502	Digital RPM	10400.00

### 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	13095.00

### Water Bath Double-walled (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.	Cap in Ltrs	Size in inches	Holes	Watt	Inner Chamber	Outer Chamber	Maximum Price Rs/Pc
50192 000	9	14 x 10 x 4	6	1000	S. S. 304	MS Powder Coated	16230.00
50192 001	15	17 x 13 x 4	12	2000	S. S. 304	MS Powder Coated	22965.00
50191 000	9	14 x 10 x 4	6	1000	S. S. 304	S. S. 304	20525.00
50191 001	15	17 x 13 x 4	12	2000	S. S. 304	S. S. 304	28440.00

### Water Bath with Digital PID Controller, Rivotek



#### Specifications

- Inner chamber is made of thick gauge S.S. 304 grade for STD / GMP
- Outer Body with powder coating only for – STD Model.
- Outer Body made of S.S. 304 grade only for – GMP Model.
- Concentric rings of 3" dia i.e. (75 mm)
- Temperature range: Ambient + 5 °C to 99 °C
- **Temperature controller - Digital PID Controller.**
- Provided with indicating lamp & on/off switch
- Electrically operated on 230V AC single phase power

Cat No.	Cap in Ltrs	Model	Size in inches	Holes	Watt	Inner Chamber	Outer Chamber	Maximum Price Rs/Pc
50192 002	9	STD	14 x 10 x 4	6	1000	S. S. 304	MS Powder Coated	25620.00
50192 003	15	STD	17 x 13 x 4	12	2000	S. S. 304	MS Powder Coated	32360.00
50191 002	9	GMP	14 x 10 x 4	6	1000	S. S. 304	S. S. 304	29915.00
50191 003	15	GMP	17 x 13 x 4	12	2000	S. S. 304	S. S. 304	37830.00

### Water Bath with Digital PID & Safety Controller, Rivotek

#### Specifications

- Inner chamber is made of thick gauge S.S. 304 grade for STD / GMP.
- Outer Body with powder coating only for – STD Model.
- Outer Body made of S.S. 304 grade only for – GMP Model.
- Concentric rings of 3" dia i.e. (75 mm).
- Temperature range: Ambient + 5 °C to 99 °C
- **Temperature controller - Digital PID Controller.**
- **Safety controller - Digital safety controller to avoid Overshoot of SET Temperature.**
- Provided with indicating lamp & on/off switch.
- Electrically operated on 230V AC single phase power.



Cat No.	Cap in Ltrs	Model	Size in inches	Holes	Watt	Inner Chamber	Outer Chamber	Maximum Price Rs/Pc
50192 004	9	STD	14 x 10 x 4	6	1000	S. S. 304	MS Powder Coated	35010.00
50192 005	15	STD	17 x 13 x 4	12	2000	S. S. 304	MS Powder Coated	41750.00
50191 004	9	GMP	14 x 10 x 4	6	1000	S. S. 304	S. S. 304	39300.00
50191 005	15	GMP	17 x 13 x 4	12	2000	S. S. 304	S. S. 304	47215.00

### Optional Accesories for Water Bath with Concentric Rings

Cat No.	Description	Maximum Price Rs/Pc
50022 504	PID Controller	10400.00
50022 503	Digital Safety Controller	10400.00

**Bunsen Burner - Digital, Rivotek** : CUP fitted in S.S. housing, insulated with high density ceramic wool insulation. Control box at bottom side finished with powder coated paint finish.

**Specifications**

- Size of cup : 55 mm Dia x 47 mm Ht.
- Stainless Steel cylindrical body SS 304 with mirror finish
- Control Panel made of MS
- Maximum working temp. 500 °C. Approximate Temperature.
- The temperature is controlled by digital PID temperature controller.
- Fuse fitted on backside for overload protection.(SAFETY)
- Rating: 350 W
- Operated on 230 Volts AC, 50 Hz, 1 Phase



Cat No.	Model	Type	Dia mm	Height mm	Shape	Watts	Maximum Price Rs/Pc
9200 000	Bunsen Burner (Digital)	Refractory crucible	55	47	Conical	350	31940.00

**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	25485.00
50171 002	10-80 ml/min	I. D. 2 / O. D. 4	25215.00
50171 003	80-650 ml/min.	I. D. 4 or 6 / O. D. 5 or 7	26450.00
50171 004	110-900 ml/min	I. D. 6 / O. D. 9	28170.00

**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	125.00
50171 502	<b>Silicone Tube</b> Size : 2 mm I.D/4mm O.D Flow Rate : 10 - 80 ml/Min	150.00
50171 503	<b>Silicone Tube</b> Size : 5 mm I.D/7mm O.D Flow Rate : 80 - 650 ml/Min	320.00
50171 504	<b>Silicone Tube</b> Size : 6 mm I.D/9mm O.D Flow Rate : 110 - 900 ml/Min	520.00
50022 501	<b>Digital Timer</b> (0 - 99 min)	10400.00

**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	8370.00





### 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	19230.00
50051 002	2	21935.00

### Hybridization Oven, Rivotek

The Hybridization oven is designed to use for molecular biology labs to prehybridize or hybridize the membranes used in blotting techniques. Modern designs combine a hybridization station, active mixing capability, accurate temperature control, into one compact bench top unit.

#### Specifications

- Interior Material : SS 304
- Exterior Material : MS coated powder coated
- Temperature range : (5 °C above Ambient) to 90 °C
- Observation : Viewing Glass Window is provided
- Temperature control : By Digital Display with microprocessor based PID Controller of accuracy  $\pm 0.1^{\circ}$  C by using PT – 100 as Sensor
- A carrier to hold bottles (6 nos. of 60 mm dia x 200 mm length) can be easily placed or removed from the rotor mechanism
- One bottle can be taken out without removing the carrier. The carrier rotates with the Bottles parallel to the door at variable speed of 2 – 15 RPM.
- Supplied without bottles, removable rocking platform SS tray is also supplied.
- Electrically operated on 230 V AC

Cat No.	Outer Chamber Dimensions (L x D x H) mm	Inner Chamber Dimensions (L x D x H) mm	Volume in ltrs	Rating Watts	Maximum Price Rs/Pc
50161 001	700 x 535 x 540	400 x 450 x 400	70	650	191785.00

Cat No.	Hybridization Bottle Dimensions (Dia x Depth) in mm	Type of bottle	Maximum No. of Bottles	Maximum Price Rs/Pc
50161 501	60 x 200	Fabricated out of Borosilicate Glass with leak proof screw cap	6	4585.00



## Orbital Shaker - Heavy Duty, Rivotek

### Specifications

- Body Material - MS Powder coated.
- Tray Material – Stainless steel SS 304
- Shaking Speed: 20 – 250 Orbital strokes per min (Without Load)
- Operates on 230 Volts AC, Single Phase

### Special Features

- **VFD Drive:** (Variable Frequency Drive) of 230 V, I Phase Input.
- **AC motor:** Brushless Induction Motor, for 24 hrs operation.
- **Digital Voltmeter:** With LCD display for better view in the dark room.



Cat No.	Tray size in mm	Digital Speed Indication	Shaking Speed (without load) in RPM	Maximum Price Rs/Pc
50081 0750	750 x 750	Yes	20 - 250	185585.00



## Ultrasonic Cleaners, Rivotek

### Specifications :

- Bath Material : SS 304
- Outer Body Material & Lid : SS 304
- Ultrasonic Generator : Advanced latest MOSFET/IGBT based SMPS
- Frequency : 40 ± 3 KHz (Except 1.5 Ltrs which is 30 KHz)
- Transducer : Imported make PZT crystals bonded on the base of the tank with weld bond technique.
- SS Basket : Provided
- Built-in Digital Timer : Provided (15 Min for 1.5 Ltr and 99 Min for all other capacities)
- Electric supply : 230V/ 50Hz AC, single phase.
- Drain : Drain valve provided at the rear side of the tank (not included for 1.5 litre model)

Cat No.	Tank Cap in litres	Tank Clear Size in mm	Ultrasonic Power Watts	Maximum Price Rs/Pc
1900 0015	1.5	240 x 135 x 65	50	24420.00
1900 0055	5.0	230 x 230 x 100	100	57709.00
1900 0090	9.0	300 x 240 x 150	200	77998.00
1900 0020	20.0	350 x 300 x 200	400	161012.00
1900 0030	30.0	375 x 375 x 200	500	172500.00
1900 0050	50.0	550 x 300 x 300	750	201250.00



**Ultrasonic Processor (Sonicator), Rivotek**

**Specifications :**

<b>Ultrasonic Power, Watts</b>	<b>150</b>	<b>250</b>	<b>500</b>
<b>Ultrasonic Frequency, Khz</b>	30		
<b>Probe Diameter mm</b>	3 / 6 / 12 / 20		
<b>Sample Volume ml</b>	1 - 150	20 - 150	25 - 500
<b>Display</b>	LED		
<b>Programmable</b>	Set 10 programs		
<b>PID Controller</b>	Microcontroller Based and Programmable		
<b>ON/OFF Pulse, sec</b>	1 to 99		
<b>Programmable Timer, min.</b>	1 to 99		
<b>Probe Material</b>	Titanium Alloys (Ti-6Al-4V)		
<b>Sealed Converter</b>	PZT (Energy Converter)		
<b>Tuning</b>	Manual Tuning & Frequency Control		
<b>Temperature Range, °C</b>	0°C to 150°C		
<b>Temperature Sensor</b>	PT 100 Sensor		
<b>Operating Voltage</b>	AC 220-203V & 50/60 Hz; Single phase		
<b>Standard Supply</b>	Ultrasonic Generator, Ultrasonic Cable, Temperature Sensor (PT100), Sealed Converter,		Probe, Wrench Set, Support Stand



Prices indicated below are without Optional Accessories

<b>Cat No.</b>	<b>Description</b>	<b>Maximum Price Rs/Pc</b>
1700 0003	Ultrasonic Power 150 Watts with Titanium Probe Tip, 3 mm	171310.00
1700 0006	Ultrasonic Power 150 Watts with Titanium Probe Tip, 6 mm	171310.00
1700 1003	Ultrasonic Power 250 Watts with Titanium Probe Tip, 3 mm	195483.00
1700 1006	Ultrasonic Power 250 Watts with Titanium Probe Tip, 6 mm	195483.00
1700 1012	Ultrasonic Power 250 Watts with Titanium Probe Tip, 12 mm	195483.00
1700 2003	Ultrasonic Power 500 Watts with Titanium Probe Tip, 3 mm	228652.00
1700 2006	Ultrasonic Power 500 Watts with Titanium Probe Tip, 6 mm	228652.00
1700 2012	Ultrasonic Power 500 Watts with Titanium Probe Tip, 12 mm	228652.00
1700 2020	Ultrasonic Power 500 Watts with Titanium Probe Tip, 20 mm	228652.00

**Optional Accessories**

<b>Cat No.</b>	<b>Description</b>	<b>Maximum Price Rs/Pc</b>
1700 0505	Sound Enclosure	28600.00
1700 0506	Laboratory Jack	12300.00





### Touch Screen Ultrasonic Processor (Sonicator), Rivotek

This is the new generation series of Probe Sonicator with uniform ultrasonic frequency 20khz and 30khz. The enclosure is soundproof with portable design. The height adjustment mechanism adds more ergonomics to the design. The TFT touch screen display with user friendly interface and PLC are programmed in a way to give advance features such as Power Amplitude control, 8 Sample processing profiles, Data Logging of Date and Time vs Temperature. This equipment is designed to handle temperature-controlled sonication tasks with temperature range from Ambient 28 °C to 70 °C. It also has feature of programmable timer up to 99 minutes. This product finds its application in wide range of industries including pharmaceuticals, cosmetics, food processing, nano technology labs, defence Sectors amongst others.



Specifications		
Ultrasonic Power, Watts	150	250
Ultrasonic Frequency Khz	30	
Probe Tip Diameter, mm	3 / 6 / 12	
Sample Volume	1-150	10-250
Probe Material	Titanium Alloy (Ti-6Al-4V)	
Sealed Converter	PZT (Energy Converter)	
Display	4.3" Touch Screen	
Programmable Timer(ON/OFF Pulse)	99 min	
ON/OFF Duty Cycle	1 to 20 sec	
Working Temperature Range	25 to 70 °C	
Display Resolution for Temp.	0.1 °C	
Temperature Stability	1°C	
User Profiles	01 to 08	
Supply Power Spec	230VAC , 50 Hz	

Cat No.	Description	Maximum Price Rs/Pc
1710 0003	Touch Screen Probe Sonicator, Power 150 watts with Titanium Probe Tip, 3 mm	290095.00
1710 0006	Touch screen probe sonicator, Power 150 watts with Titanium Probe Tip, 6 mm	290095.00
1710 1003	Touch Screen Probe Sonicator, Power 250 Watts with Titanium Probe Tip, 3 mm	321410.00
1710 1006	Touch Screen Probe Sonicator, Power 250 Watts with Titanium Probe Tip, 6 mm	321410.00
1710 1012	Touch Screen Probe Sonicator, Power 250 Watts with Titanium Probe Tip, 12 mm	321410.00

### Chiller Sonicator Bath, Rivotek

**System** : The system consists of 2 parts.

A) Ultrasonic Chamber.

B) Cooling System consisting of cooling coils, condenser & compressor of suitable capacity. This helps in maintaining the required temperature in the Ultrasonic Chamber.

Technical Specifications :			
Tank Size	10 L	20 L	30 L
Model	Table Top	Table Top	Floor Mounted
Tank Size	12" x 10" x 6"	18" x 12" x 6"	14" x 14" x 10"
Basket Size	11" x 9" x 5"	17" x 11" x 5"	12" X 12" X 8"
Inner body material	SS 304(16 SWG thickness) with rounded corners & mirror finish		
Outer body material	SS 304 (18 SWG thickness with matt finish)		
Total Solvent Capacity	10 ltrs	20 ltrs	30 lts
Electric Supply	230V AC, 50Hz, Single phase		
Power Output ( Ultrasonic)	250 watt	400 watt	500 watt
Timer	0-99 min With Digital Display of set & actual.		
Temperature controller	Digital temperature controller with setting range 10°C to max 30°C. Display Resolution: 1°C		
Cooling System	Hermetically sealed Compressor, CFC free Refrigerant		
Auto degassing	Preset for 5 Min.		
PSP	Pulse sweep power for uniform distribution of Ultrasonic energy		
Frequency	33 kHz $\pm$ 3 KHz.		
Transducers	Imported make PZT type bonded at the Bottom of the tank with weld bond technique		
Ultrasonic Generator	Advanced latest IGBT based SMPS		
Drain	1/2" Drain with Ball valve will be provided.		
Legs	Rubber Bush	Rubber Bush	Castor Wheels
Bath Liquid	Water/ Solvent		
STD Accessories	SS304 basket, Mains cable, SS304 Lid		



Cat No.	Tank Capacity Ltr	Tank Size in inches L x W x H	Overall Dimensions in inches L x W x H	Ultrasonic Power Watts	Maximum Price Rs/Pc
1910 0010	10	12 x 10 x 6	18 x 18 x 20	250	158840.00
1910 0020	20	18 x 12 x 6	24 x 20 x 20	400	183343.00
1910 0030	30	14 x 14 x 10	22 x 22 x 36	500	232183.00



## 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 - 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 H x D in inches	Chamber Size L x H x D 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 H x D in inches	Chamber Size L x H x D 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 1000 °C Working temperature up to 950 °C	9 x 4 x 4	22 x 10 x 10	Price on Request
6901 0002	up to 1000 °C Working temperature up to 950 °C	10 x 5 x 5	22 x 12 x 12	Price on Request
6901 0003	up to 1000 °C Working temperature up to 950 °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 1000 °C Working temperature up to 950 °C	9 x 4 x 4	22 x 10 x 10	Price on Request
6902 0002	up to 1000 °C Working temperature up to 950 °C	10 x 5 x 5	22 x 12 x 12	Price on Request
6902 0003	up to 1000 °C Working temperature up to 950 °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 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




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**B.O.D. Incubator - STD Model, Rivotek**


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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	60 x 60 x 60	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	450 / 16	60 x 60 x 125	Price on Request
6101 0035	5 °C to 60 °C	1000 / 35	80 x 100 x 125	Price on Request

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**B.O.D. Incubator - GMP Model, Rivotek**


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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	60 x 60 x 60	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	450 / 16	60 x 60 x 125	Price on Request
6102 0035	5 °C to 60 °C	1000 / 35	80 x 100 x 125	Price on Request

---

**Autoclave - Fully Automatic - GMP Model, Rivotek**


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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

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**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 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 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 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 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



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**B. O. D Incubator, Rivotek**

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<b>Cat No.</b>	<b>Description</b>	<b>Maximum Price Rs/Pc</b>
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 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

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**Autoclave Steam Sterilizer, Rivotek**

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<b>Cat No.</b>	<b>Description</b>	<b>Maximum Price Rs/Pc</b>
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

---

**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 GST which shall be extra as applicable on the date of Invoice.**
- ❑ 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 warranty 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 warranty. Again damage resulting due to accident/misuse is not covered under warranty. Warranty 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  
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*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: [info@rivieraglass.co.in](mailto:info@rivieraglass.co.in)

[rivieraglass1995@gmail.com](mailto:rivieraglass1995@gmail.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 - 43650734

e-mail: [rivieradelhi@gmail.com](mailto:rivieradelhi@gmail.com)

*Southern Regional Office :*

TS-73, Thiru-Vi-Ka Industrial Estate,  
Ekkaduthangal, Chennai 600 032.

Telefax : 044 - 22251185

e-mail: [rivierachennai@gmail.com](mailto:rivierachennai@gmail.com)

*Eastern Regional Office*

Shanti Niketan, 1st Floor,  
10, Iswar Chowdhury Road,  
Kolkata 700 029.

Telefax : +91-33-24666462

e-mail: [rivieraglass\\_kolkata1@yahoo.com](mailto:rivieraglass_kolkata1@yahoo.com)

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C/2116, Oberoi Garden Estates,  
Chandivli Studio Road,  
Chandivli, Andheri (East),  
Mumbai - 400 072, INDIA.  
Phone : 2847 5228 / 2847 3297  
E-mail : [info@rivieraglass.co.in](mailto:info@rivieraglass.co.in)  
[rivieraglass1995@gmail.com](mailto:rivieraglass1995@gmail.com)  
Website : [www.rivieraglass.co.in](http://www.rivieraglass.co.in)

