

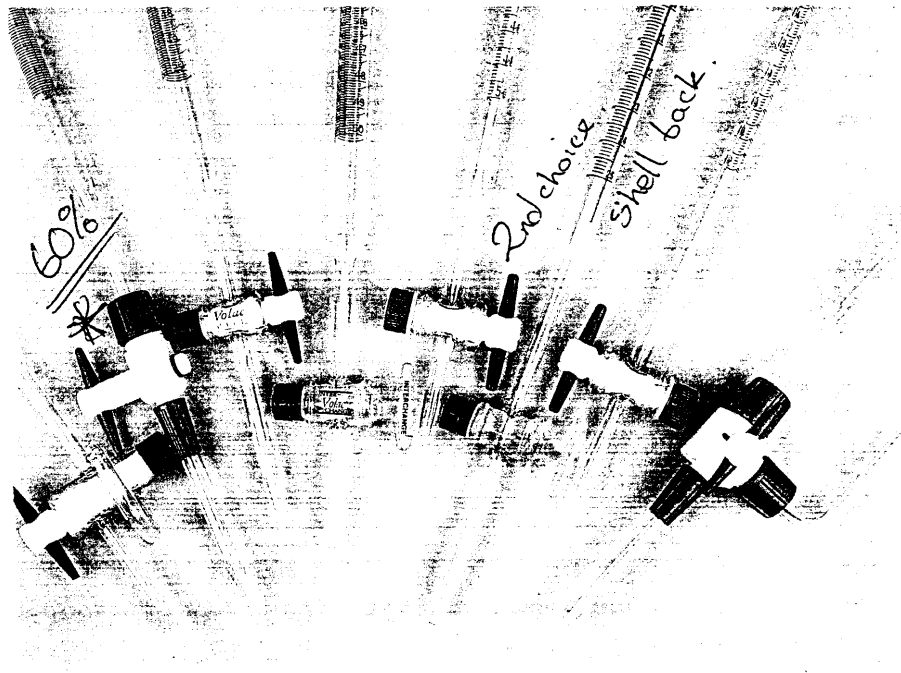
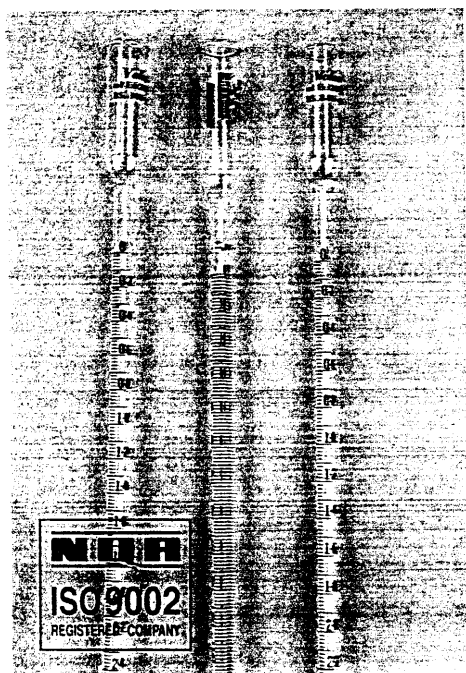


712-9543 to 712-9762

John Poulten Ltd.

77-93 Tanner Street, Barking, Essex IG11 8QD, England
Telephone: 0181-594 4256 Telefax: 0181-594 8419**VOLAC – VOLumetric ACCuracy – The Ultimate Precision in Laboratory Glassware****BURETTES**

To British Standard BS846

**Volac – Probably the most *reliably* accurate laboratory volumetric products available**

“Volac” burettes are manufactured in a range of sizes from 1 ml to 100 ml capacity. All “Volac” burettes now come in single packs.

Three cane forms are available – Class A standard, Class B standard and Class B Schellbach, each featuring bold figures and fine graduation lines in permanent amber stain. Expanded cups are added to sizes up to 10 ml for ease of filling. Except where stated all forms are available with the following stopcocks across the whole capacity range. These three cane forms combine with six different types of stopcock.

- 1) Type R901; Class B straight glass key in glass barrel.
- 2) Type R903; Interchangeable straight glass key in glass barrel.
- 3) Type R906; Interchangeable straight ptfe key in glass barrel.
- 4) Type R907; Interchangeable 2-way ptfe key in glass barrel.

5) Type R904; 2-way ptfe stopcock fully removable.

6) Type R909; Straight ptfe stopcock fully removable.

Additionally R200 covers dispensing burettes and R201 covers auto-zero burettes.

Types R909 and R904 form new ranges which offer particularly good performance and value. The use of ptfe for both key and barrel ensures minimum “stick-slip” in operation and no maintenance.

While polypropylene jets can be made available for the R909 stopcock at no extra charge experience now shows that only glass jets give the accuracy and controlled rates of flow associated with “Volac” quality.

CLASS A

Class A burettes are available uncertified (suffix NC) or with a works certificate (suffix WAC). All “Volac” Class A burettes are individually calibrated and tested, are all individually numbered and fully traceable, and all show their flow time inscribed on the instrument. Works certificate burettes additionally come with a certificate specifying accuracy at 5 points. Where glass jets are removable they are also inscribed with the number of the instrument for traceability*.

CLASS A BURETTE RANGES

Prefix	R9803/NC/-Uncertified	} Class A burettes with interchangeable straight glass key in glass barrel.
	R9803/WAC/-Certified	
	R9806/NC/-Uncertified	} Class A burettes with interchangeable straight ptfe key in glass barrel.
	R9806/WAC/-Certified	
	R9807/NC/-Uncertified	} Class A burettes with interchangeable 2-way ptfe key in glass barrel.
	R9807/WAC/-Certified	
	R9804/NC/-Uncertified	} Class A burettes with 2-way ptfe stopcock fully removable.*
	R9804/WAC/-Certified	
	R9809/NC/-Uncertified	} Class A burettes with straight ptfe stopcock fully removable.*
	R9809/WAC/-Certified	

CLASS A SIZE RANGE USING THE STOPCOCKS AND PREFIXES SHOWN

Code Suffix	Capacity/graduation	Pack size	Accuracy limits $\pm$ ml	Flow time limits in secs
R-/-/A	1 ml in 0.01	1	0.01	35-45
B	2 ml in 0.02	1	0.01	50-70
C	5 ml in 0.02	1	0.01	75-95
Y	10 ml in 0.02	1	0.02	60-100
Z	10 ml in 0.05	1	0.02	75-95
F	25 ml in 0.05	1	0.03	70-100
G	25 ml in 0.1	1	0.05	45-75
H	50 ml in 0.1	1	0.05	60-100
I	100 ml in 0.2	1	0.10	60-100

CLASS B

"Volac" Class B burettes are available across a similar volume range to Class A. All stopcocks used for Class A are available plus a Class B straight glass key in a glass barrel (range R9101).

The new range R9109 with removable ptfe key and body is economical and offers exceptional performance with minimised stick slip and no maintenance. The R9104 range offers equivalent performance with a two-way flow stopcock.

CLASS B BURETTE RANGES

- Prefix R9101/- Class B burettes with straight glass key in glass barrel.
- R9103/- Class B burettes with interchangeable straight glass key in glass barrel.
- R9106/- Class B burettes with straight ptfe key in glass barrel.
- R9109/- Class B burettes with straight ptfe removable stopcock.
- R9107/- Class B burettes with 2-way flow ptfe key in glass barrel.
- R9104/- Class B burettes with 2-way flow ptfe removable stopcock.

CLASS B SIZE RANGES

Code Suffix	Capacity/graduation	Pack size	Accuracy limits $\pm$ ml	Flow time limits in secs
R-/A/S	1 ml in 0.01	1	0.02	20-45
/B/S	2 ml in 0.02	1	0.02	25-70
/C/S	5 ml in 0.02	1	0.02	40-95
/D/S*	5 ml in 0.05	1	0.05	—
/E/S	10 ml in 0.02	1	0.05	40-95
/Z/S	10 ml in 0.05	1	0.05	45-75
/F/S*	10 ml in 0.1	1	0.05	—
/G/S	25 ml in 0.05	1	0.05	35-100
/H/S	25 ml in 0.1	1	0.1	25-75
/I/S	50 ml in 0.1	1	0.1	30-100
/J/S	100 ml in 0.2	1	0.2	30-100

*not listed in B846.

SCHELLBACH BURETTE RANGES

- Prefix R9501/- Schellbach burettes with straight glass key in glass barrel.
- R9503/- Schellbach burettes with interchangeable straight glass key in glass barrel.
- R9506/- Schellbach burettes with straight ptfe key in glass barrel.
- R9507/- Schellbach burettes with 2-way flow ptfe key in glass barrel.
- R9509/- Schellbach burettes with straight ptfe removable stopcock.
- R9504/- Schellbach burettes with 2-way flow ptfe removable stopcock.

As with standard Class B burettes the new R9509 and R9504 ranges offer excellent economy allied to absence of stick slip and no maintenance.

SCHELLBACH SIZE RANGES

Code Suffix	Capacity/graduation	Pack size	Accuracy limits $\pm$ ml	Flow time limits in secs
R-/A/S*	10 ml in 0.1	1	0.05	—
/B/S	25 ml in 0.1	1	0.10	25-75
/C/S	50 ml in 0.1	1	0.10	30-100
/D/S	100 ml in 0.2	1	0.20	30-100

*not listed in BS846

SPECIAL NOTE

When users wish to check the accuracy of volumetric glassware, care should be taken not only to avoid parallax error but also to avoid a false view of the bottom of the meniscus. Use of a black ring, clip or surround 1 mm below the mark will give a black reflection on the bottom of the meniscus and dramatically improve the accuracy of the reading (see ISO4787 or BS6696). We can supply suitable black clips on request.

DISPENSING BURETTES

For the delivery of larger volumes of liquid, these burettes incorporate graduations and bold figures in permanent amber markings and a single way (straight) glass key in a glass barrel.

- R200/A 250 ml in 1 ml single pack ± 1 ml accuracy
R200/B 500 ml in 2 ml single pack ± 2 ml accuracy

AUTO-ZERO BURETTES

These burettes have a zero setting overflow and 2-way ptfe interchangeable key in a glass barrel. Graduation and figures are in permanent amber stain. The overflow cup is detachable.

- R201/A 25 ml in 0.1 single pack ± 0.1 ml accuracy
R201/B 50 ml in 0.1 single pack ± 0.1 ml accuracy

R904 SERIES GUIDANCE FOR USE

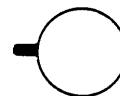
Burettes with R904 series stopcocks, R9804, R9104, R9504 fully removable 2-way ptfe stopcocks.

A small orange marker button is situated on one side only at 90° to the key arms.

Using the position of this marker button as shown in figure 1 the following functions are possible:



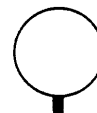
With marker button in any 45° position all inlets/outlets are CLOSED.



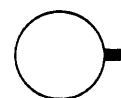
Liquid flow from burette open to jet; reservoir closed.



Liquid flow from reservoir open to burette; jet closed.



Liquid flow from reservoir open to jet; burette closed.



Burette, reservoir and jet all open (warning - burette may overflow in this position).

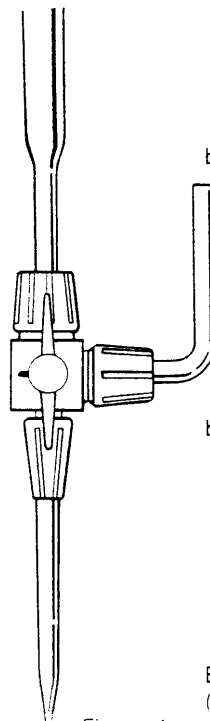
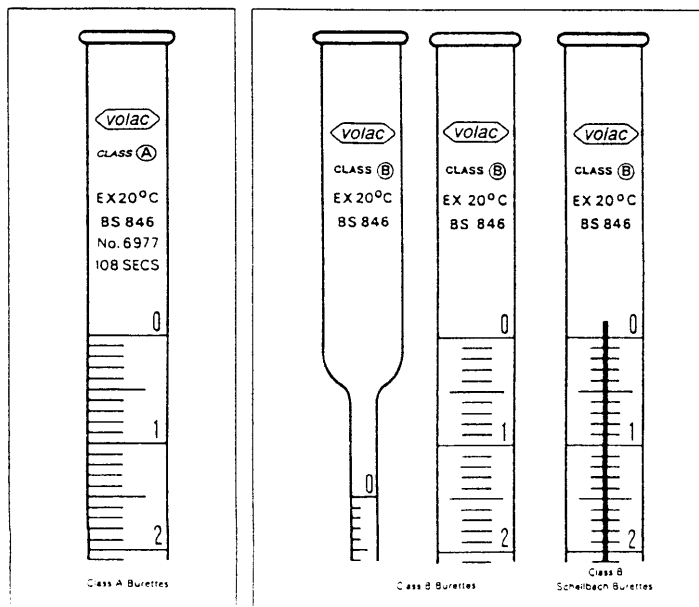


Figure 1