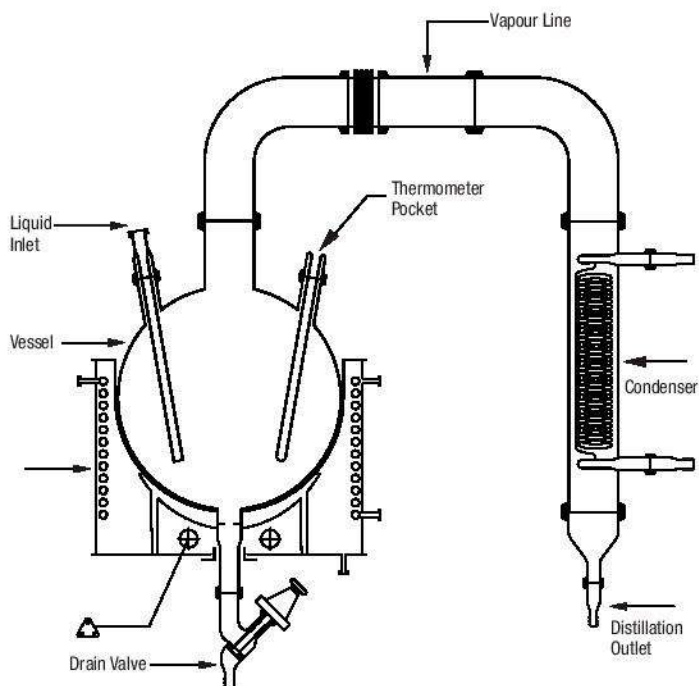


PACKAGE UNITS

Package Units/ Assemblies are multi-purpose units having flexibility of utility. These units have been standardised by incorporating all basic & essential features such as heating, stirring, condensation, fractionation, cooling etc. for multipurpose use. Therefore, though termed " Package Units" from constructional viewpoint they actually serve as "Flexi Units" from utility point of view. These units find use in educational institutions, R&D centers and industries. They can be conveniently and quickly modified according to specific process needs due to modular construction, Borosilicate glass offers additional benefits of universal corrosion resistance, visibility and cleanliness.

SIMPLE DISTILLATION UNITS

It consists of a vessel mounted in a heating bath and fitted with a condenser for condensing the fumes. receiver with drain valve can be added for receiving the condensate. The units are available in vessel sizes of 20, 50, 100, 200 & 300 Ltr. and is suitable for operation under atmospheric pressure and full vacuum.



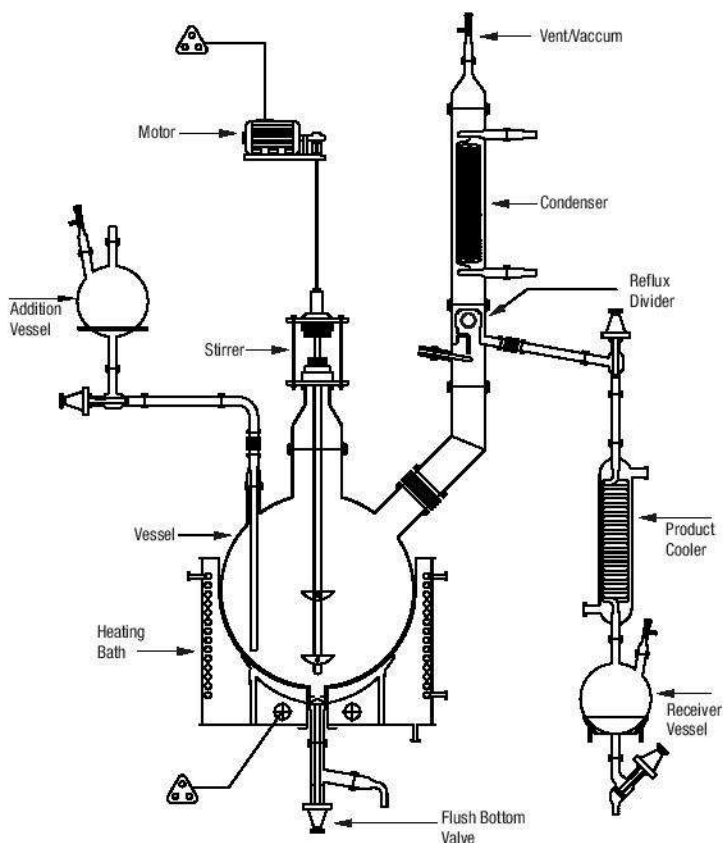
Reactor Capacity	Bath KW	Vapour Line	Condenser M ²	Cat. Ref.
10 L	2	50 DN	0.2	SDU 10
20 L	3	80 DN	0.35	SDU 20
50 L	4.5	100 DN	0.5	SDU 50
100 L	6	150 DN	1.5	SDU 100
200 L	9	150 DN	1.5	SDU 200
300 L	10.5	225 DN	2.5	SDU 300

REACTION UNIT

This unit is used for carrying out reactions under stirred condition and with provision for simple reflux distillation.

The reaction vessel is mounted in a heating bath and fitted with addition vessel, motor-driven stirrer and provision for condensation with refluxing. The product is sub-cooled and collected in a receiver.

The units are available in vessel sizes of 20, 50, 100 & 200 & 300Ltr is suitable for operation under atmospheric pressure and full vacuum.



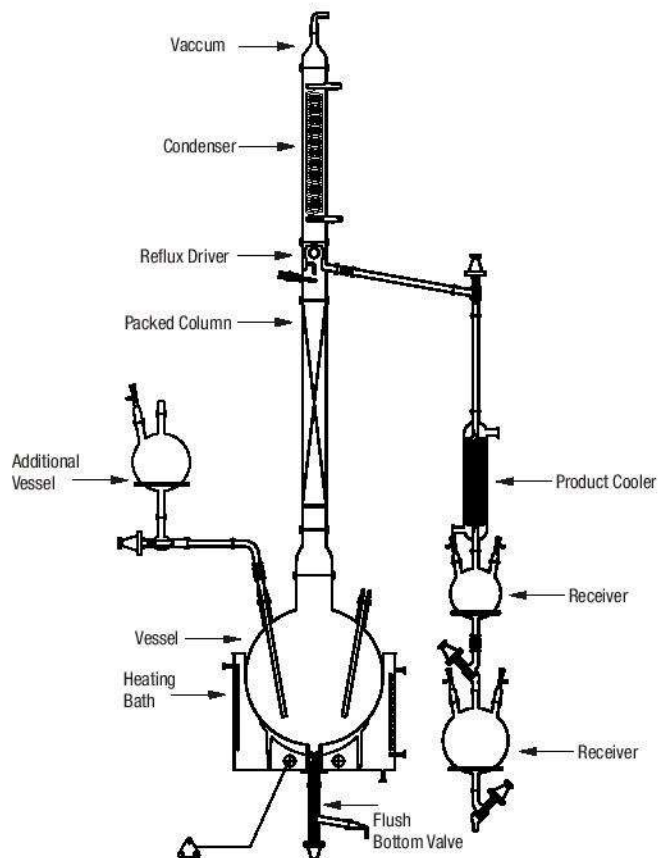
Reactor Capacity	Bath KW	Addition Vessel	Vapour Line	Condenser HTA M ²	Cooler HTA M ²	Receiver Size	Cat. Ref.
10 L	2	2	50 DN	0.2	0.1	2L	RDU 10
20 L	3	2 L	80 DN	0.35	0.1	5L	RDU 20
50 L	4.5	5 L	100 DN	0.5	0.2	10L	RDU 50
100 L	6	10 L	150 DN	1.5	0.35	20L	RDU 100
200 L	9	20 L	150 DN	1.5	0.35	20L	RDU 200
300 L	10.5	20 L	225 DN	2.5	0.5	20L	RDU 300

*These units are available in cylindrical vessel also.

FRACTIONAL DISTILLATION UNIT

This is essentially a compact batch-type fractional distillation unit in which the reboiler consists of a vessel mounted in a heating bath and with a packed column above. The vapours from top is condensed and can be refluxed as per requirement. The top product is sub-cooled and collected in receivers. The bottom product is finally drained from the reboiler through a drain valve. The units are available in vessel sizes of 20, 50, 100 & 200L, and 300Ltr. is suitable for operation under atmospheric pressure and full vacuum.

Reactor Capacity	Bath KW	Addition Vessel	Vapour Line	Condenser HTA M ²	Cooler HTA M ²	Receiver Size	Cat. Ref.
10 L	2	2 L	50 DN	0.2	0.1	2L, 2L	FDU 10
20 L	4	2 L	80 DN	0.35	0.1	2L, 5L	FDU 20
50 L	4.5	5 L	100 DN	0.5	0.2	5L, 10	FDU 50
100 L	6	10 L	150 DN	1.5	0.35	10L, 20L	FDU 100
200 L	9	20 L	150 DN	1.5	0.35	10L, 20L	FDU 200
300 L	10.5	20 L	225 DN	2.5	0.5	20L, 20L	FDU 300



REFLUX REACTION CUM DISTILLATION UNIT

This is a versatile unit and can be used as Reaction Distillation Unit, Fractional Distillation Unit or a combination of both. All features of Reaction Distillation Unit and Fractional Distillation Unit are incorporated.

The units are available in vessel sizes of 20, 50, 100 & 200L, and 300Ltr. is suitable for operation under atmospheric pressure and full vacuum.

Reactor Capacity	Bath KW	Addition Vessel	Vapour Line	Condenser HTA M ²	Cooler HTA M ²	Receiver Size	Cat. Ref.
10 L	2	2 L	50 DN	0.2	0.1	2 L, 2L	FRU 10
20 L	3	2 L	80 DN	0.35	0.1	2L, 5L	FRU 20
50 L	4.5	5 L	100 DN	0.5	0.2	5L, 10L	FRU 50
100 L	6	10 L	150 DN	1.5	0.35	10L, 20L	FRU 100
200 L	9	20 L	150 DN	1.5	0.35	10L, 20L	FRU 200
300 L	10.5	20 L	225 DN	2.5	0.5	20L, 20L	FRU 300

