

# VESSELS

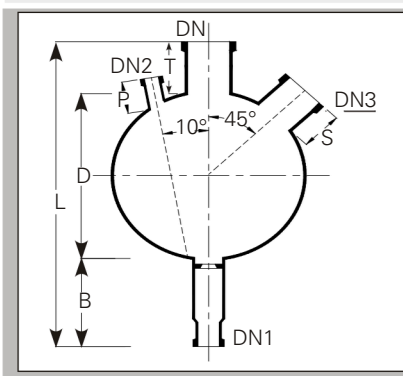
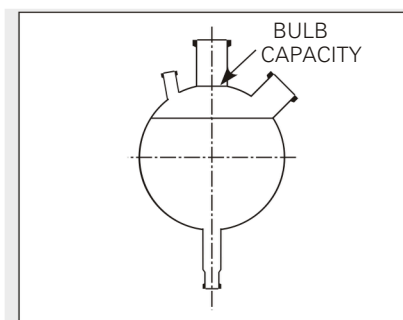


In most of the glass plants, vessels are used as reactors, receivers, separators, measuring or feed vessels.

Vessels are available in Spherical shape from 5Ltr to 500Ltr. & in cylindrical shape from 5Ltr to 800Ltr capacity. Cylindrical vessels can be supplied with glass jackets too.

All the vessels are provided with a bottom outlet for which a suitable valve can be chosen from our range of valves.

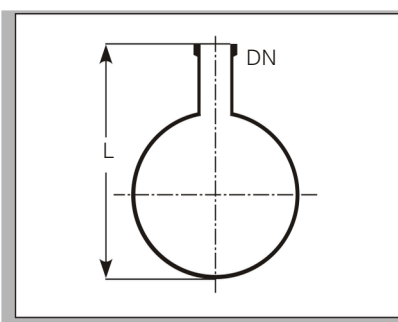
## SPHERICAL VESSEL - GENERAL DATA



Nominal	Maximum Pressure (Bar)
5	1
10	0.8
20	0.7
50	0.5
100	0.4
200	0.3
300	0.2
500	0.1

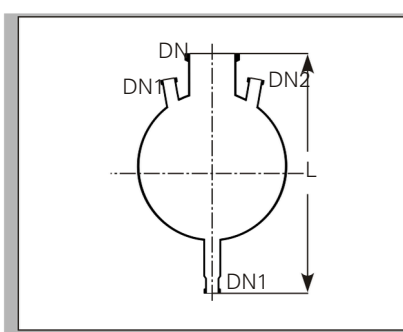
Nominal Capacity (Ltrs.)	L	D	DN	T	DN1	B	DN2	P	DN3	S
5	425	225	50	75	25	125	25	50	40	75
10	575	285	80	90	25	200	25	50	40	75
20	650	350	100	100	25	200	25	50	40	75
50	840	490	100	100	40	200	40	75	100	100
50A	840	490	150	150	40	200	40	75	100	100
100	950	600	150	150	40	200	40	75	100	100
100A	950	600	225	150	40	200	40	75	100	100
200	1200	750	225	225	40	200	40	75	100	100
200A	1200	750	300	250	40	200	40	75	100	100
300	1310	860	300	300	50	200	50	75	100	100
300A	1310	860	400	300	50	200	50	75	100	100
500	1450	1000	450	250	50	200	50	75	150	165

## SINGLE NECK SPHERICAL VESSELS



Cat. Ref.	Nominal Capacity	L	DN
VSA5	5 L	300	50
VSA10	10 L	375	80
VSA20	20 L	450	100
VSA50	50 L	640	100
VSA50A	50 L	640	150
VSA100	100 L	750	150
VSA100A	100 L	750	225
VSA200	200 L	1000	225
VSA200A	200 L	1000	300
VSA300	300 L	1110	300
VSA300A	300 L	1110	400
VSA500	500 L	1250	450

## THREE NECK BOTTOM OUTLET SPHERICAL VESSELS



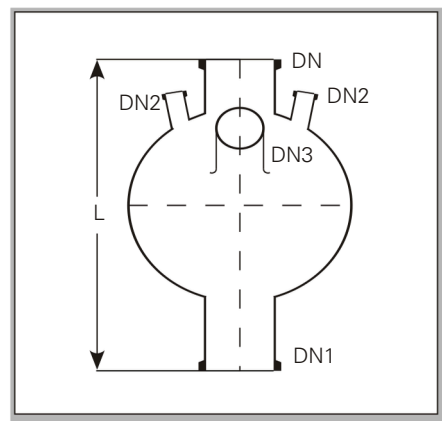
Cat. Ref.	Nominal Capacity	L	DN	DN1	DN2
VSM5	5 L	425	50	25	25
VSM10	10 L	575	80	25	25
VSM20*	20 L	650	100	25	25
VSM50*	50 L	840	100	40	40
VSM50A	50 L	840	150	40	40
VSM100	100 L	950	150	40	40
VSM100A	100 L	950	225	40	40
VSM200	200 L	1200	225	40	40
VSM200A	200 L	1200	300	50	50
VSM300	300 L	1310	300	50	50
VSM300A	300 L	1310	400	50	50
VSM500	500 L	1450	450	50	50

# VESSELS

## SPHERICAL VESSELS WITH WIDE BOTTOM OUTLET

These vessels are generally used to fit immersion exchangers in the bottom. Special heating mantle or bath should be used if used with.

Cat. Ref.	Nominal Capacity	L	DN	DN1	DN2	DN3
VSR50	50L	790	100	150	40	100
VSR50A	50L	790	150	150	40	100
VSR100	100L	900	150	150	40	100
VRS100A	100L	900	225	150	40	100
VSR200	200L	1150	225	150	40	100
VSR200A	200L	1150	300	150	40	100
VSE50	50L	840	100	100	40	100
VSE50A	50L	840	150	150	40	100
VSE100	100L	950	150	150	40	100
VSE100A	100L	950	225	225	40	100
VSE200	200L	1200	225	225	40	100
VSE200A	200L	1200	300	300	40	100

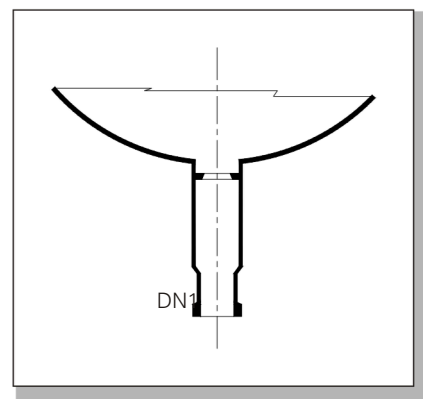


## VESSELS WITH BOTTOM OUTLET VALVE SEAT

To fit a bottom outlet valve (BAL type) all spherical and cylindrical vessels can be supplied with valve seat in bottom outlet. For this, Add a suffix "/B" to the catalogue reference of a vessel, for e.g. 'VSL50' should be mentioned as 'VSL50/B'.

### Notes on use of Spherical vessels.

- Generally, the centre nozzle, referred as DN in all types of vessels, is used for either stirrer fixing or if stirrer is not fixed, for vapour outlet.
- The bottom outlet, referred as DN1 in all types is used for drain. However, in type VSR & VSE, it is also used for fixing immersion heat exchanger.
- The small side nozzles, referred as DN2 in all types, are used
  - to fix thermometer pocket or,
  - to fix dip pipe for liquid inlet or,
  - to fix sparger for gas purging or,
  - to fix vacuum control or vent valve or,
  - for solid addition.
- The bigger side nozzle, referred as DN3, is used for vapour outlet where stirrer is fixed on centre neck. It can also be used for cleaning in case centre neck is used for vapour outlet.
- Vessels having long bottom outlet, viz VSM, VSPL, VSL, VS etc, can be supported in a heating mantle of heating bath. However, vessels having short bottom outlet, viz VSD, VR, VA etc. are to be supported on a vessel holder only. In case of vessels upto 20L size, vessel holding rings can be used instead of vessel holder.

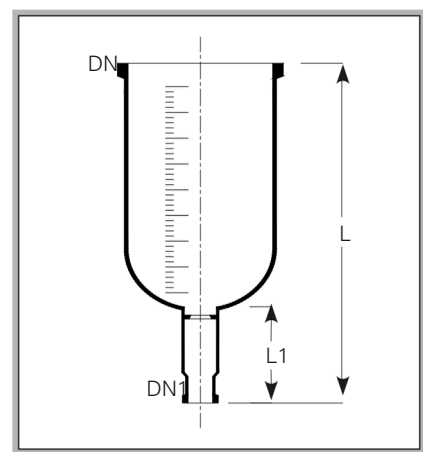


## CYLINDRICAL VESSELS

Cylindrical vessels of 50 Litres and above must be supported in a vessel holder.

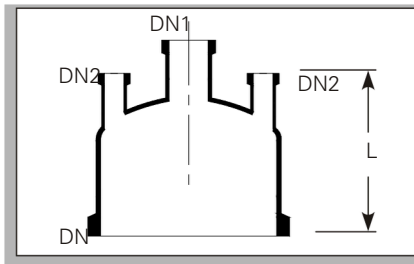
Cat. Ref.	Nominal Capacity	DN	DN1	L	L1
VZ5/4	5 L	100	25	850	175
VZ10/6	10 L	150	25	775	175
VZ20/9	20 L	225	25	750	175
VZ20/12	20 L	300	40	575	175
VZ50/12	50 L	300	40	1000	175
VZ50/16	50 L	400	40	710	175
VZ100/16	50 L	400	40	1050	175
VZ100/18	100 L	450	40	900	175
VZ150/16	150 L	400	40	1450	175
VZ150/18	150 L	450	40	1225	175
VZ200/18	200 L	450	40	1500	175
VZ300/24	300 L	600	50	1340	175

Note : For graduation required on vessel, additional charges will be applicable.



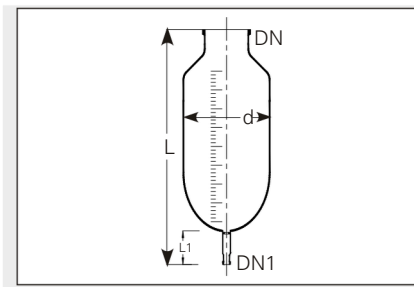
# VESSELS

## CYLINDRICAL VESSEL COVERS



Cat. Ref.	DN	DN1	DN2	L
VZA4	100	40	2x25	200
VZA6	150	40	2x40	200
VZA9	225	50	3x25	250
VZA12	300	80	3x40	250
VZA16	400	100	3x40	275
VZA18	450	100	4x40	275
VZA24	600	100	4x40	300

## KETTLES

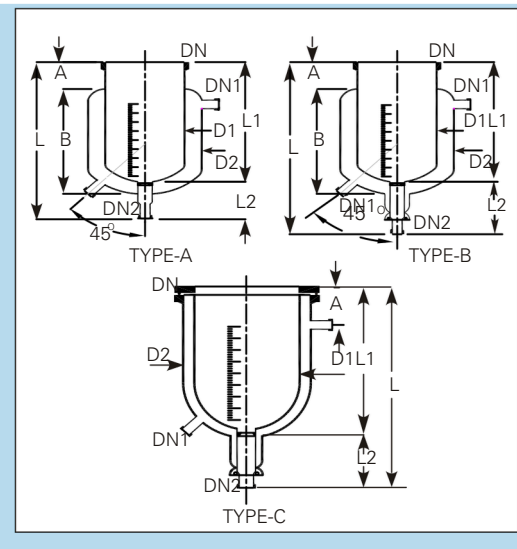


Kettles are similar to cylindrical vessels but having a reduced top neck.

Cat. Ref.	Nominal Capacity	DN	DN1	L	L1	d
KZ200	200 L	300	40	1400	175	540
KZ350	350 L	400	50	1500	175	620

Note : For graduation required on kettles, additional charges will be applicable.

## JACKETED VESSELS



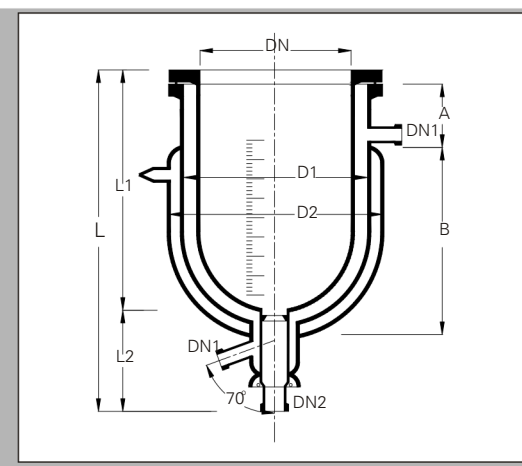
For special applications, cylindrical vessels can be supplied with a jacket for heating or cooling. Jacket is sealed to the vessel with Viton 'O' ring and other sealing compositions. The seal prevents high stresses between vessel and jacket by allowing the movement flexibility between two due to thermal expansion.

### Glass Jackets

Glass Jacket can be used for a maximum operating pressure of 0.5 bar and a maximum operating temperature of 130°C in jacket. The temperature difference between jacket & vessel should not be exceeded than 120°C

Cat. Ref.	L	L1	L2	A	B	D1	D2	DN	DN1	DN2	TYPE
VZD5/6	500	325	125	75	275	165	215	150	25	25	A
VZD10/9	575	400	125	90	340	230	280	225	25	25	B
VZD20/12	625	450	125	100	385	315	370	300	25	40	B
VZD30/12	750	575	175	100	510	315	370	300	25	40	B
VZD50/12/14	1050	875	175	-	-	315	365	300	25	40	C
VZD50/16/20	825	650	175	-	-	415	500	400	25	40	C
VZD100/20/24	955	780	175	-	-	516	600	500	25	40	C
VZD200/24/28	1175	100	175	-	-	615	700	600	25	40	C

## JACKETED VESSELS (TRIPLE WALL)



Goel is presenting Flexi(Detachable) "Transparent Double Jacketed Vessel" to maintain the leading position in industry by way of developing indigenously newer products with higher value towards their Mission and to cater the customer via innovation.

### Salient Features

- Made from SCHOTT DURAN

Vacuum Jacket ensures

- Transparent insulation.
- Minimum heat loss
- Process visibility.
- Minimize frost formation for cryogenics operation.

Vacuum Jacket & main vessels are detachable ensures

- Ease of cleaning.
- No breakages due to thermal expansion.
- Partial Replacement of any part can be possible to reduce the maintenance cost.

Cat. Ref.	L	L1	L2	A	B	D1	D2	DN	DN1	DN2
VZT5/6/8	620	350	175	75	310	215	275	150	25	25
VZT10/9/12	700	420	175	90	370	315	390	225	25	25
VZT20/12/14	675	500	175	125	368	365	423	300	25	40
VZT50/16/18	825	650	175	200	350	465	523	400	25	40