VST 12 – Vertical Split Tube Furnaces

The VST tube furnaces use free radiating wire elements embedded within the insulation of the furnace body. The benefit of this design is its flexibility; with the use of tube adapters the same furnace can be used with a variety of tube diameters.

These furnaces comprise a furnace body which is hinged and split into two halves along its length. This makes exchange of work tubes easier and also enables the furnace to be used with reactors or work tubes where end flanges would make insertion into a non-split furnace difficult. This design is particularly suitable for incorporation into extension test and creep test apparatus. This range of tube furnaces does not include an integral work tube and one must be selected as an additional item. The work tube length is dependent on the application eg for use with modified atmosphere or vacuum. This information can be found on pages 92-93. The use of a separate work tube has the advantage of protecting the heating elements from damage or contamination. The 'near-hinge' format is standard, an alternative option that can be specified at the time of purchase is the 'far-hinge' format, where the pivot of hinges is further from the centre line of the furnace to enable a wider opening action.



- 1200°C maximum operating temperature
- Accepts work tubes with outer diameters up to 110 mm
- Heated lengths of 200, 300, 400, 600, 900 mm
- Furnace splits into two halves and accommodates tubes or samples fixed into a test rig
- Wire elements in high quality vacuum formed insulation ensure fast heat up, excellent temperature uniformity and short cool down times
- Supplied in 'near-hinge' configuration complete with stand
- Vertical furnace with a separate control module on a 2 metre conduit (for vertical use only)
- Carbolite 301 digital PID controller with single ramp to setpoint, digital display and process timer



Options (specify these at time of order)

- Insulation plugs, gas tight end seals and vacuum connections available
- 'Far-hinge' configuration providing wider opening of furnace body
- Wide choice of tube diameters and materials is available: eg quartz, ceramic, metal. See pages 92-93 for tube materials and dimensions
- Over-temperature control; recommended for unattended operation and to protect a valuable load
- Control module on longer 6 metre conduit
- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications (see pages 88-91)

Technical data

Model	Max temp (°C)	Heat-up time (mins)	Dimensions: Max outer diameter accessory tube (mm)	Dimensions: Heated length (mm)	Dimensions: Furnace body length (mm)	Recom- mended tube length for use in air (mm)	Recom- mended tube length for use with modified atmosphere (mm)	Dimensions: External Furnace (inc stand) H x W x D (mm)	Dimensions: Control module H x W x D (mm)	Max power (W)	Hold- ing power (W)	Thermo- couple type	Weight (kg)
VST 12/200	1200	45	110	200	350	550	650	640 x 500 x 495	222 x 370 x 376	1000	800	N	24
VST 12/300	1200	45	110	300	450	650	750	740 x 500 x 495	222 x 370 x 376	1500	850	N	25
VST 12/400	1200	45	110	400	550	750	850	840 x 500 x 495	222 x 370 x 376	2000	900	N	26
VST 12/600	1200	45	110	600	750	950	1050	1040 x 500 x 495	222 x 370 x 376	3000	1100	N	32
VST 12/900	1200	45	110	900	1050	1250	1350	1340 x 500 x 675	222 x 370 x 376	4500	1450	N	44

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- Heat up rate is measured to 100 $^{\circ}\text{C}$ below max, using an empty tube & insulation plugs

- Maximum continuous operating temperature is 100 °C below maximum



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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.





