Hanse Environmental, Inc.

VTC-1.5 HALT/HASS Chamber Specifications



NEW IMPROVED! Design
VTC-1.5 Chamber

Hanse Environmental, Inc.

Performance

Temperature Range: -75˚ to +175° C (-100° to +200° Optional)
Air Change Rate: 70° C/min (-65° to 100° C)
Stabilization: ± 1˚ C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 30 KW Nichrome SCR Controlled
Thermocouples: One (1) air, one (1) for specimen.

Vibration:
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 70 Grms (100 GRMS Optional)
Table: 20" x 20" (508mm x 508mm) with twenty-five (25) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 Grms
Vibration Actuators: Three (3) Medium pneumatically actuated. Table vibration, ± 1 Grms within one (1) minute of settling.
Maximum Load: 250 lbs.(113.3 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior Upper: 24"W x 24"D x 23"H (610mm x 610mm x 584mm)
Interior Lower: 24"W x 24"D x 34"H (610mm x 610mm x 863mm)
Exterior: 40"W x 42"D x 81"H (1098mm x 889mm x 2057mm)
Doors: One (1). One full opening
Windows: One (1) Tempered heated Multi-pane. 12" x 12" (305mm x 305mm) in door.
Light: Two (2) lights adjustable.
Ports: Two (1) 6"dia. (152mm) for customer use.
Insulation: Hanse's exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: Nominal 73 dbA @ 1 meter 2.9
Weight: 1000 lbs (453 kg)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air**.**

Utilities

Electric: 480V 3 Ph 50 FLA (Other Voltages on Request)
Liquid Nitrogen: 3/8" (9mm) Supply 40/50 psig
Compressed Air: 1/2" (13mm) Supply 120 psig, 25 SCFM
Exhaust Ports: One (1) 4" (102mm) dia. vented to outside.

Note: Specifications are subject to change without notice.

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VTC-4 HALT/HASS Chamber Specifications



VTC-4 Specification
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Hanse Environmental, Inc.

PERFORMANCE

Temperature Range: -100˚ to +200˚ C
Product Change Rate: 70˚ C/min (-65˚ to +100º C).
Stabilization: ± 1˚ C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 48 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen. Type T Isolated.

Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 Grms**,**
Table: 24" x 24" (610mm x 610mm) with twenty (20) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 GrmsRange with cable and three axes mounting block.
Vibration Actuators: Two (2) Large and Two (2) Medium pneumatically actuated. Table vibration, ± 1 Grms within one (1) minute of settling.
Maximum Load: 700 lbs.(317 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior: 30"W x 30"D x 36"H (762mm x 762mm x 910mm)
Exterior: 60"W x 44"D x 95"H (1524mm x 1118mm x 2578mm)
Doors: Two (2). One full opening both front and back.
Windows: Two (2) Tempered Multi pane heated. 20" x 20" (508mm x 508mm) in each door.
Light: Two (2) lights
Ports: Two (2) 6"dia. (150mm) for customer use.
Insulation: Hanse's exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: Nominal 73 dbA @ 1 meter
Weight: 1,900 lbs (862 kg)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 60 FLA
Liquid Nitrogen: 1/2" VJ Bayonet Supply 40/50 psig
Compressed Air: ¾" (19 mm) Supply 120 psig, 45 SCFM
Exhaust Ports: One (1) 4" (100mm) Dia. vented to outside.

Note: Specifications are subject to change without notice.

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VTC-6 HALT/HASS Chamber Specifications



VTC-6 Specification
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Hanse Environmental, Inc.

PERFORMANCE

Temperature Range: -100˚ to +200˚ C
1.1.2 Product Change Rate: 70˚ C/min (-65˚ to +100˚ C).
Stabilization: ± 1º C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 48 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen.

Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 Grms
Table: 30" x 30" (762mm x 762mm) with twenty four (24) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 Grms Range with cable and three axes mounting block.
Vibration Actuators: Two (2) Large and Three (3) Medium pneumatically actuated. Table vibration, ± 1 Grms within one (1) minute of settling.
Maximum Load: 700 lbs.(317 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior: 36"W x 36"D x 36"H (914mm x 914mm x 914mm)
Exterior: 66"W x 49"D x 96"H (1499mm x 1232mm x 2578mm)
Doors: Two (2). One full opening both front and back.
Windows: Two (2) Tempered Multi-pane Heated. 20" x 20" (508mm x 508mm) one in each door.
Light: Two (2) lights
Ports: Two (2) 6"dia. (150mm) for customer use.
Insulation: Hanse's exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: Nominal 73 dbA @ 1 meter
Weight: 2,500 lbs (1,133 kg)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 125 FLA
Liquid Nitrogen: 1/2" VJ Bayonet Supply 40/50 psig
Compressed Air: ¾" (19 mm) Supply 120 psig, 55 SCFM
Exhaust Ports: One (1) 4" (100mm) Dia. vented to outside.

Note: Specifications are subject to change without notice.

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VTC-9 Eco HAST/HASS System Specification



(Not actual photo)

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Performance

Temperature Range: -100˚ to +200˚ C
Product Change Rate: 70˚ C/min (-65˚ to +100˚ C).
Stabilization: ± 1˚ C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 99 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen.

Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 Grms,
Table: 36” x 36” (914mm x 914mm) with one hundred (64) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 GRMS Range with cable and three axes mounting block.
Vibration Actuators: Four (4) Large and Five (5) Medium pneumatically actuated. Table vibration, ± 1 Grms within one (1) minute of settling.
Maximum Load: 700 lbs.(317 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior: 42”W x 42”D x 38”H (1067mm x 1067mm x 965mm)
Exterior: 68.25”W x 61”D x 98”H (1734mm x 1549mm x 2489mm)
Doors: Two (2), Front and rear.
Windows: Two (2) Tempered Multi pane 20” x 20”
Light: Three (3) lights
Ports: Three (3) 6”dia. (150mm) for customer use.
Insulation: Hanse’s exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: At 10 GRMS, nominally 68 dBA @ 1 meter.
Weight: Less then 4,000 lbs (TBD)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 160 FLA
Liquid Nitrogen: 1/2” VJ Bayonet Supply 40/50 psig
Compressed Air: 1” (19 mm) Supply 120 psig, 120 SCFM
Exhaust Ports: Two (2) 6” (150mm) Dia. vented to outside.

Note: Specifications are subject to change without notice.

Hanse Environmental, Inc.

VTC-9 HAST/HASS System Specification

Updated VTC-9

Single door, Front and Rear (Not pictured)
Now we include LN2 VJ Valve and Heated Windows.



Hanse Environmental, Inc.

Performance

TemperatureRange: -100˚ to +200˚ C
Product Change Rate: 70˚ C/min (-65˚ to +100˚ C).
Stabilization: ± 1˚ C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 99 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen.

Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 Grms
Table: 36” x 36” (914mm x 914mm) with one hundred (64) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 GRMS Range with cable and three axes mounting block.
Vibration Actuators: Four (4) Large and Five (5) Medium pneumatically actuated. Table vibration, ± 1 Grms within one (1) minute of settling.
Maximum Load: 700 lbs.(317 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior:
Upper Position: 42”W x 42”D x 38”H (1067mm x 1067mm x 965mm)
Lower Position: 42”W x 42”D x 50”H (1067mm x 1067mm x1270mm)
Exterior: 72”W x 55”D x 107”H (1829mm x 1397mm x 2718mm)
Doors: Two (2). Opening both front and back. Manual latches
Windows: Two (2) Tempered Multi pane heated 20” x 20” (508mm x 508mm). One (1) in each door.
Light: Three (3) lights
Ports: Three (3) 6”dia. (150mm) for customer use.
Insulation: Hanse’s exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: At 10 GRMS, nominally 68 dBA @ 1 meter.
Weight: 4,000 lbs (1,814 kg)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 160 FLA
Liquid Nitrogen: 1/2” Vacuum Jacked Valve manifold.
Compressed Air: 1” (19 mm) Supply 120 psig, 120 SCFM
Exhaust Ports: Two (2) 6” (150mm) Dia. vented to outside.

Note: Specifications are subject to change without notice.

VTC-16 Eco HALT/HASS System Specifactions



(Not actual photo)

PERFORMANCE

Temperature Range: -100° to +200° C
Product Change Rate: 70° C/min (-65° to +100° C).
Stabilization: ± 1° C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 99 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen.
Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 GRMS, at 25° to 30°C with unloaded table.
Table: 48" x 48" (1219mm x 1219mm) with one hundred (121) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 GRMS Range with cable and three axes mounting block.
Actuators: Four (4) Large and Four (4) Medium.
Stability: Table vibration, ± 1 GRMS within one (1) minute of achieving Set point.
Maximum Load: 500 lbs.(227 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior Workspace: 54"W x 54"D x 38"H (1372mm x 1372mm x 965mm)
Exterior: 81.5"W x 74"D x 101"H (2070mm x 1880mm x 2565mm)
Doors: Two (2) front and back.
Windows: Two (2) Tempered Multi-pane Heated 20" x 20". One (1) in each door.
Light: Four (4) lights
Ports: Two (2) 6" dia. (150mm) for customer use.
Insulation: Hanse's exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: At 10 GRMS, nominally 68 dBA @ 1 meter.
Weight: 4,000 lbs (1814 kg)
Caster wheels: Caster with leveling foot, one person operated

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 125 FLA
Liquid Nitrogen: 1/2" Bayonet Supply 40/50 psig
Compressed Air: 1" (19 mm) Supply 120 psig, 100(200) SCFM
Exhaust Ports: Two (2) 6" (150mm) Dia. vented outside

Note: Specifications are subject to change without notice.

VTC-16 Specification
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VTC-16 HALT/HASS System Speciation



Photo showing optional Bi-Split doors

PERFORMANCE

Temperature Range: -100° to +200° C
Product Change Rate: 70° C/min (-65° to +100° C).
Stabilization: ± 1° C after stabilization. (Stabilization < 2 minutes).
Cooling: Liquid Nitrogen (LN2) direct injection.
Heating: 99 KW Nichrome wire heaters, SCR controlled.
Thermocouples: One (1) air, one (1) for specimen.
Vibration
Tri-Axial: Six-Degree-of-Freedom (6DoF) Vibration, non-coherent broadband vibration 10-10,000Hz, up to 100 GRMS, at 25° to 30°C with unloaded table.
Table: 48" x 48" (1219mm x 1219mm) with one hundred (121) 3/8-16 (M10) standoff mounting inserts.
Accelerometers: One (1) Model Dytran 3030B5, 500 GRMS Range with cable and three axes mounting block.
Actuators: Four (4) Large and Four (4) Medium.
Stability: Table vibration, ± 1 GRMS within one (1) minute of achieving Set point.
Maximum Load: 500 lbs.(227 kg)

Instrumentation

Process View HV Programmable Temperature and Control: Programmable temperature ramps. Closed loop cascade temperature control of product under test. Ethernet connection
Thermocouples: One (1) for temperature control and one (1) for product response.
Vibration Control: Programmable vibration ramps, Grms level, and test duration all synchronized with the temperature controller.
Accelerometers: One (1) accelerometer, cable and mounting block provided.
Optional: 24 CH of universal inputs data logger D4T (TC, RTD, Voltage, mA). Vibration analyzer sold in 4 Ch units up to 16 Channels.

Chamber Construction

Interior:
Upper Position: 54"W x 54"D x 38"H (1372mm x 1372mm x 965mm)
Lower Position: 54"W x 54"D x 50"H (1372mm x 1372mm x 1270mm)
Exterior: 84"W x 67"D x 107"H (2134mm x 1702mm x 2718mm)
Doors: Two (2) front and back.
Windows: Two (2) Tempered Multi-pane heated 20" x 20". One (1) in each door.
Light: Three (3) lights
Ports: Three (3) 6"dia. (150mm) for customer use.
Insulation: Hanse's exclusive multilayer staggered insulation for superior thermal and noise insulation.
Sound Level: At 10 GRMS, nominally 68 dBA @ 1 meter.
Weight: 4,250 lbs (1927 kg)

Safety

Door Interlocks: Door Interlocks shut off system operation.
Emergency Power Off (EPO): EPO activation shuts off system operation
Over/Under Limit: FM approved limit with stand-alone sensor placed in air.

Utilities

Electric: 480V 3 Ph 125 FLA
Liquid Nitrogen: 1/2" Bayonet Supply 40/50 psig
Compressed Air: 1" (19 mm) Supply 120 psig, 100(200) SCFM
Exhaust Ports: Two (2) 6" (150mm) Dia. vented outside

Note: Specifications are subject to change without notice.