

(4) Models from 1,500 PPH to 3,000 PPH C.B.D. Capacity

- Most Cost Effective H.R.S.'s.
- Low up-front costs.
- High return on investment.



HX Series:
Shell and
coil only heat
exchanger.



HVX Series:
Includes coil heat
exchanger &
recovers flash steam.

Part Numbering Format

Format: 1st - start with HX, or HVX. 2nd - add capacity number. 3rd - add ancillary equipment adders and upgrades as necessary.

1.) "HX" SERIES *
SMALL, EFFICIENT, COST EFFECTIVE

BLOWDOWN CAPACITIES
"20" - 2,000 PPH *
"25" - 2,500 PPH *
"30" - 3,000 PPH *

2.) "HVX" SERIES
(HV / HX HYBRID)

BLOWDOWN CAPACITIES
"15" - 1,500 PPH

*NOTE: HX series heat exchangers do not offer flash steam recovery.

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OPTIONAL ANCILLARY EQUIPMENT 'ADDITIONS'

"H" - HIGH LEVEL ALARM SYSTEM, P/N HC002B

"I" - CUSTOM FIT ISULATION JACKET, P/N = HV50(CAPACITY)IJ

"A" - COPPER COIL HEAT EXCHANGER - shorter service life, but more efficient BTU recovery

"O" - MADDEN ORIFICE METER(S), P/N OM250_A OR OM650_A, - for blowdown flow rate control.

"M" - INLET MANIFOLD, P/N HV310, 3" X 36", Sch 80, SA106 or A53, CS, up to (3) 1" FNPT connections.

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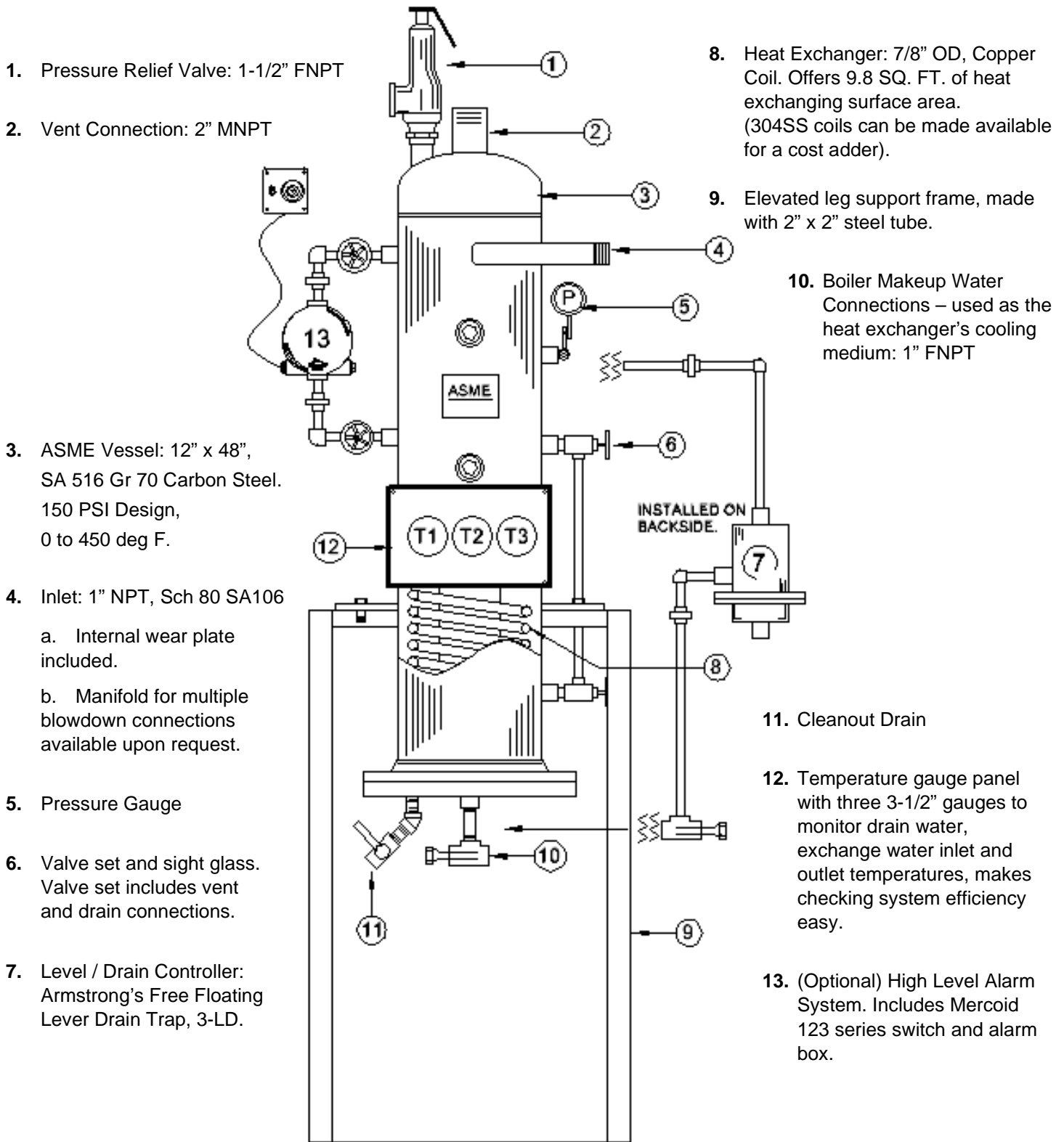
Full P/N Example:

HVX15	-	HIA	-	2
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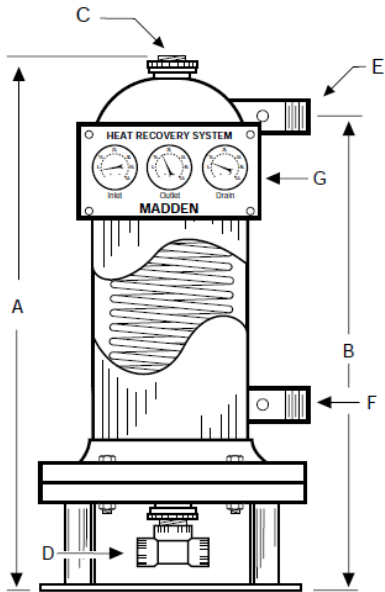
Madden Features – Model No. HVX15

NEW - Hybrid model between the Type HV and Type HX.

Compact like the original HX to keep cost low as possible but now has room to recover flash steam like the HV.

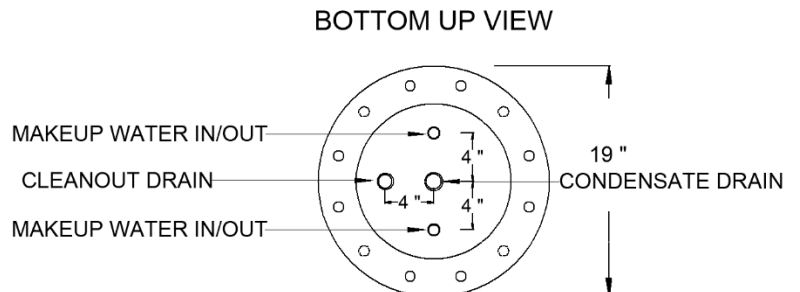
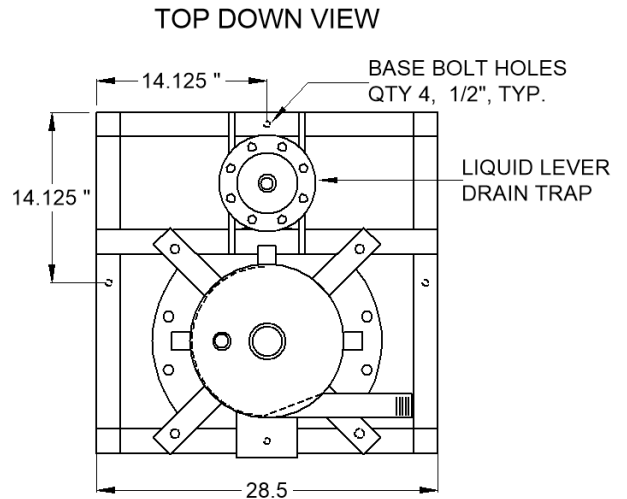
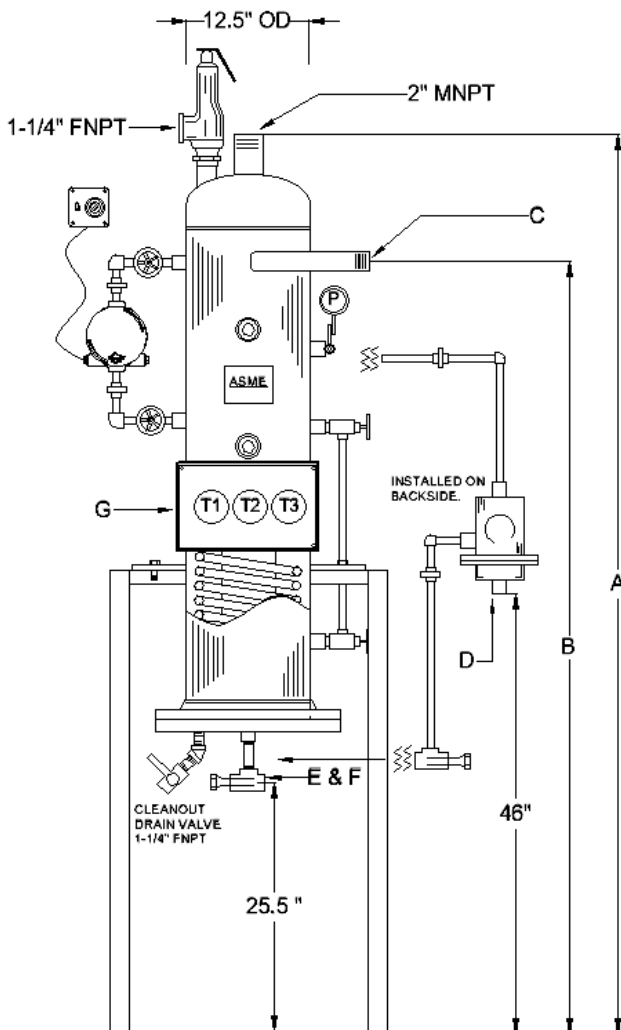


Dimensions - Type HX Heat Recovery Systems



Model Number	HX20	HX25	HX30	HVX15
Capacity (PPH)	2,000	2,500	3,000	1,500
Flash Steam ?	N	N	N	Y
Coil Area (Sq. Ft.)	17	21	25	9.8
Coil Material	Copper / SS	Copper / SS	Copper / SS	Copper
A (OAH)	42"	48"	54"	92.5"
B	22"	28"	34"	79"
C - BD Inlet	1-1/2"	1-1/2"	1-1/2"	1-1/2"
D - Blowdown Drain	1-1/2"	1-1/2"	1-1/2"	1"
E - Makeup Water Inlet	2-1/2"	2-1/2"	2-1/2"	1"
F - Makeup Water Out	2-1/2"	2-1/2"	2-1/2"	1"
G - Temperature Gauges and Nameplate. Includes 3 digit Serial Number.				
Ship Weight (Lbs.)	500	525	575	595

Dimensions - Type HVX15 Heat Recovery System



Madden Ancillary Equipment



Orifice Meter - Flow Control Option

The adjustable Madden Orifice Meter has 17 different orifices to select for accurate blowdown flow control. Durable, guaranteed for 10 years against cutting, wire drawing, or other distortion. One unit required for each boiler.

The Madden Orifice Meter enables the boiler operator to maintain accurate, repeatable flow control for continuous top blowdown.

Two models:

- OM250 – for boilers up to 250 psi.
- OM650 – for boilers up to 650 psi.

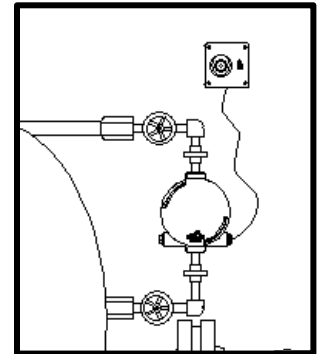
Features include:

- Sediment chamber w/stainless steel filter screen.
- Removable adjustment key.
- Stainless steel, heat-treated orifice plate.
- Drain valve and flush filter screen.

High Level Switch and Alarm System

All heat recovery systems, less the 'original' HX series, have an optional high-level switch and alarm system (P/N HC002B). Madden typically uses a Mercoid 123 series SPDT switch with our alarm box. The switch enclosure is "general purpose". Other switches can be sourced upon request.

The alarm box is a 4" x 4" x 4" PVC wall mount box (NEMA 4X) with manual silencing toggle switch. It is wired to blink the light and sound the alarm. Contractors can connect to the same alarm contact to then wire an external output signal elsewhere at the job site.



Custom Insulation Jackets – Cost efficient and easy to install.

Madden offers M.I.T. International insulation jackets to further boost the energy efficiency of our heat recovery systems. The jackets are built to order to fit your particular HV, HC, or HX system. They fit around all connections and come with Velcro straps and hog ring ties to further secure the jacket to the system.

This material has a durable silicone interior and exterior cloth with 1" thick insulation. Rated to 500 deg F.

Not only will this material increase your system's efficiency, it also protects local personnel from accidentally touching the units when operating.



MADDEN
ENGINEERED PRODUCTS

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