

<b>YVAA Safety Shutdowns</b>		<b>Trip</b>	<b>Auto Restart</b>	<b>System Fault</b>	<b>Unit Fault</b>	<b>Lockout</b>
<b>Unit (Chiller) Safeties</b>						
1	High Ambient Temp Fault	Trip 130°F/ Reset 128°F	Yes		Yes	
2	Low Ambient Temp Fault	Trip -2°F to 50°F/Reset 2°F above cutout	Yes		Yes	
3	Low Leaving Chilled Liquid Temp Fault (Water)	Trip 36°F/ Reset 4°F above cutout	Yes		Yes	
4	Low Leaving Chilled Liquid Temp Fault (Glycol)	Trip 11° to 36°F/ Reset 4°F above cutout	Yes		Yes	
5	VSD Communications Failure Fault	No comm between Control Board and VSD Logic Board @ startup, or loss of comm while running.	Yes		Yes	
<b>System Safeties</b>		<b>Trip</b>	<b>Auto Restart</b>	<b>System Fault</b>	<b>Unit Fault</b>	<b>Lockout</b>
1	High Discharge Pressure Cutout (Software) Fault	trips @ 325 psig/resets @ 295 psig	No	Yes		1st fault
2	High Discharge Pressure Cutout (Hardware) Fault	trips @337 psig/resets @ 252 psig	No	Yes		1st fault
3a	Low Suction Pressure Cutout (Software) Fault (Water)	24 to 36 psig, default is 24 psig	No	Yes		1st fault
3b	Low Suction Pressure Cutout (Software) Fault (Glycol)	5 to 36 psig, default is 24 psig	No	Yes		1st fault
4	Low Motor Current Cutout Fault	<10%FLA	No	Yes		1st fault
5	High Differential Oil Pressure Cutout Fault (Pressure drop across oil filter)	Discharge to Oil differential >65 psid	No	Yes		1st fault
6	Low Differential Oil Pressure Cutout Fault (differential between oil pressure & suction pressure)	Cutout is linearly ramped 0 to 30 psid in 5 to 10 min. based on ambient temp.	No	Yes		1st fault
7a	High Discharge Temp Cutout Fault (Shutdown)	Cutout @ 250°F, reset @ 200°F	No	Yes		1st fault
7b	High Discharge Temp Cutout Fault (Start Inhibit)	> 200°F	Yes	Yes		1st fault
8	Low Discharge Superheat Cutout Fault	< 5° for 5 minutes	No	Yes		1st fault
9	Sensor Failure Cutout Fault	suct, oil, dischrge press. Motor temp	No	Yes		1st fault
10a	High Motor Temp Cutout Fault	250°F	No	No		
10b	High Motor Temp Cutout Fault (Start Inhibit)	240°F	No			
11	System Control Voltage Cutout Fault	Loss of 115 vac to System 1 or System 2	No	Yes		1st fault
12	Eductor Clog Fault	10°F above suction temp for 600 sec	No	Yes		1st fault

	<b>VSD Safeties</b>	<b>Trip</b>	<b>Auto Restart</b>	<b>System Fault</b>	<b>Unit Fault</b>	<b>Lockout</b>
1	Pre-charge Low DC Bus Voltage (Software) Fault	41 VDC/four sec. 500 VDC/19 sec.	Yes	4 comp's	2 or 3 comp's	3rd fault/90 min.
2	Pre-charge DC Bus Voltage Imbalance (Software) Fault	plus/minus 100 VDC of 325 VDC	No	4 comp's	2 or 3 comp's	1st fault
3	High DC Bus Voltage (Hardware) Fault	766 VDC	Yes	4 comp's	2 or 3 comp's	3rd fault/90 min.
4	Low DC Bus Voltage (Software) Fault	500 VDC	Yes	4 comp's	2 or 3 comp's	3rd fault/90 min.
5	DC Bus Voltage Imbalance (Software) Fault	plus/minus 100 VDC of 325 VDC	No	4 comp's	2 or 3 comp's	1st fault
6	High Motor Current (Hardware) Fault	575.5 Amps	Yes	Yes		3rd fault/90 min.
7	Motor Current Overload (Software) Fault	> 105% for 20 sec.	No	Yes		1st fault
8	Motor Current Overload (Hardware) Fault	> 105% for 30 sec.	No		Yes	1st fault
9	IGBT Gate Driver (Hardware) Fault	Gate Driver senses short circuit	Yes	Yes		3rd fault/90 min.
10	High Baseplate Temp (Software) Fault	218°F/2&4 comp & 232°F/3 comp	Yes	yes		3rd fault/90 min.
11	High VSD Internal Ambient Temp (Software) Fault	158°F	Yes @148°F		Yes	
12	Single Phase Input (Hardware) Fault	Single Phase condition	Yes	4 comp's	2 or 3 comp's	
13	Power Supply (Hardware) Fault	VSD Logic Board loses DC voltage	Yes			3rd fault/90 min.
14a	Run Relay (Software) Fault - Software Run Signal - Chiller On	Loss of comm run signal from Control Board to Logic Board	Yes	Yes		3rd fault/90 min.
14b	Run Relay (Software) Fault - Hardware Run Signal - Chiller Off	Loss of 115vac run signal from HPCO switch to Logic Board	Yes	Yes		3rd fault/90 min.
15	VSD Logic Board Failure (Software) Fault	Logic board did not respond back to the Control Board after voltage&freq. command was given				
16	VSD CT Plug (Hardware) Fault	No CT plug installed on logic board	Yes		Yes	3rd fault/90 min.