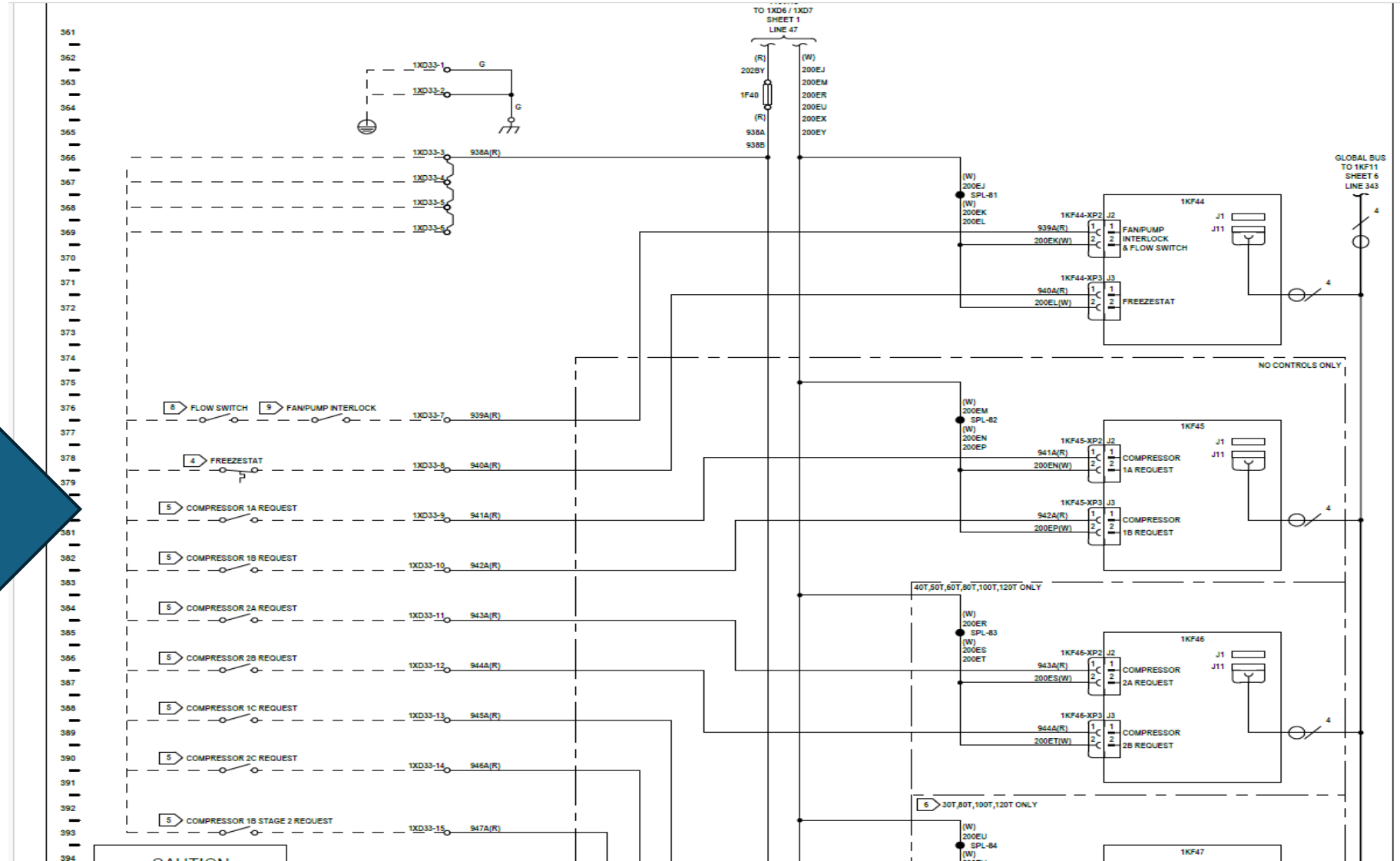


No Control RAUK Customer Connection

All inputs to the 1XD33 terminal block are 115Vac inputs; The unit wiring provides the 115Vac from the 1T1 transformer. The Interlock is required on all configurations, but the Freezestat is for EVP config only (Be sure to read the notes at the bottom of the schematic. If the unit is not configured for "No Control" then the LLID devices for the Compressor staging inputs will not be present/installed in the unit's control box...see next slide for Compressor Staging and sequence information.



No Control Compressor Sequence



The 20 & 25 Ton unit have 4 or 5 (The 25 Ton unit has two different size compressors and so Compressor 1A alone is ~60% capacity, the 20 Ton has the same size compressors) The Staging request for 20 Ton is as follows:

Cool 1= 115Vac on 1XD33-10; Comp 1B Unloaded

Cool 2= 115Vac on 1XD33-10 & 15; 1B full load

Cool 3= 115Vac on 1XD33-10 & 9; 1A on 1B Unloaded

Cool 4= 115Vac on 1XD33- 9, 10, 15; 1A on 1B full load

This is just an example of recommended commands for the Compressor staging request to the 1XD33 terminals, but the sequence can be customized by the user per the note in the snip from the IOM...so if a “Lead/Lag” is desired the staging can be altered, or if the controller does not have adequate outputs for all stages, then terminals may be “jumped” together. The Supply Air VAV and EVP configured units will use this sequence automatically to control to a “Discharge Air Temp Setpoint” the Customer Connection requirements for those configs are in the next slide.

Compressor Oil

NOTICE

Compressor Damage!

POE oil is hygroscopic – it absorbs water directly from the air. This water is nearly impossible to remove from the compressor oil and can result in compressor failures.

To prevent POE oil from absorbing water, the system should not remain open for longer than necessary. When open, dry nitrogen should flow through the piping. Only new oil containers should be used for service and maintenance. Always use the smallest container size required for the job requirements. Always leave the oil container tightly sealed until time of use. Do not reuse oil that has been opened.

RAUK unit and replacement compressors ship fully charged with POE oil from the factory. The scroll compressor uses POE oil (OIL00079 for a quart container or OIL00080 for a gallon container) without substitution. The appropriate oil charge for a 7.5 ton scroll compressor is 6.3 pints. For 9 through 15 ton light commercial scroll compressors is 7 pints. For a 15 and 20 ton large commercial scroll compressors (80 to 120 ton units), use 14.2 pints.

Compressor Sequencing

Table 30. Compressor sequence: 20 to 120 ton units

Unit Size	Control Staging	Circuit 1	Circuit 2	% Loaded Unit
20	1	1B Unloaded	-	23
	2	1B		40
	3	1A, 1B Unloaded		62
	4	1A, 1B	-	100
25	1	1B Unloaded	-	22
	2	1B		40
	3	1A		60
	4	1A, 1B Unloaded		82
	5	1A, 1B	-	100
30	1	1A	-	25
	2	1B		38
	3	1A, 1B		62
	4	1B, 1C		75
	5	1A, 1B, 1C	-	100

Table 30. Compressor sequence: 20 to 120 ton units (continued)

Unit Size	Control Staging	Circuit 1	Circuit 2	% Loaded Unit
40	1	1A	-	23
	2	1A	2A	46
	3	1A, 1B	2A	73
	4	1A, 1B	2A, 2B	100
50	1	1A	-	24
	2	1A	2A	48
	3	1A, 1B	2A	74
	4	1A, 1B	2A, 2B	100
60	1	1A	-	25
	2	1A	2A	50
	3	1A, 1B	2A	75
	4	1A, 1B	2A, 2B	100
80	1	1A	-	17
	2	1A	2A	33
	3	1A, 1B	2A	50
	4	1A, 1B	2A, 2B	66
	5	1A, 1B, 1C	2A, 2B	83
	6	1A, 1B, 1C	2A, 2B, 2C	100
100	1	1A	-	15
	2	1A	2A	30
	3	1A, 1B	2A	45
	4	1A, 1B	2A, 2B	59
	5	1A, 1B, 1C	2A, 2B	80
	6	1A, 1B, 1C	2A, 2B, 2C	100
120	1	1A	-	17
	2	1A	2A	33
	3	1A, 1B	2A	50
	4	1A, 1B	2A, 2B	66
	5	1A, 1B, 1C	2A, 2B	83
	6	1A, 1B, 1C	2A, 2B, 2C	100

Note: Compressor sequencing applies to Supply Air VAV and EVP control only. No Control units are staged based on compressor request by the user.

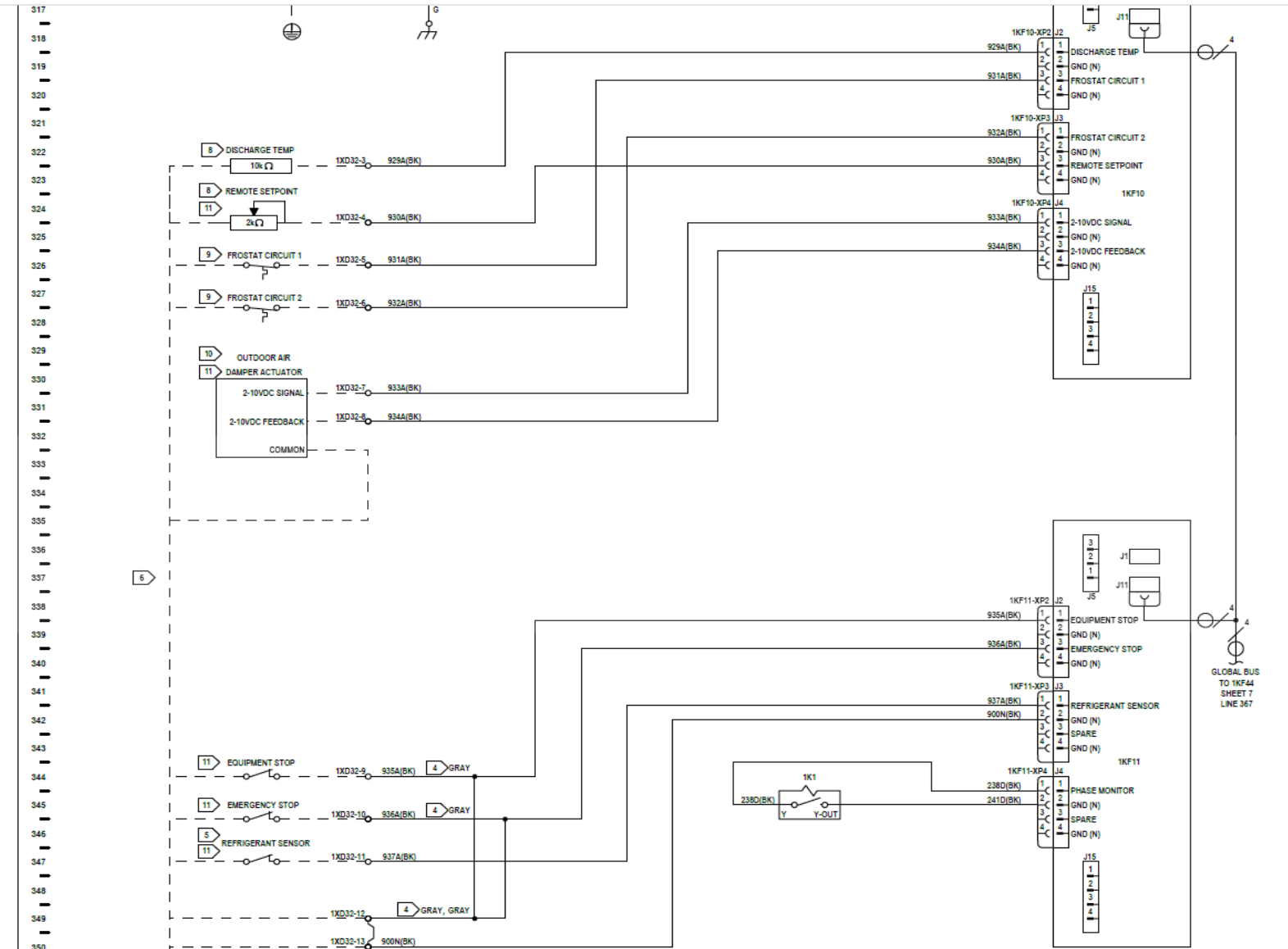
Pressure Curves

Note: For the following curves, all compressors and condenser fans are running.

EVP and VAV Customer Connections

The inputs on the 1XD32 are all Vdc or “Normally Closed to Common”. The Froststat inputs are only required for “No Control” and VAV configurations, EVP does not require the Froststat since it will have a “FreezeStat” input. See Pages 71 and 72 in “SS-SVX091C-EN” for the resistance values for the Discharge temp and Remote setpoint inputs. The Emergency Stop, Equipment Stop, and Refrigerant monitor inputs must be closed to operate the unit even in Manual Override mode for all configs.

Regardless of Application, Configuration, or Unit location a field supplied Refrigerant Leak Detection device is required.



Isolation Solenoid and Hot Gas Bypass Wiring

The Liquid Line Isolation Solenoid and Hot Gas Bypass valves are 115Vac outputs from the 1KF49 module to the 1XD33 terminal block. The Iso solenoids are required devices, but the HGBP are optional per the unit configuration and application.

