



**I N D U S T R I A L
R E F R I G E R A T I O N
C O N T R O L S**

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Logix Screw Compressor Control System (CCS)

Order Configuration Worksheet

Order acceptance is contingent on Worksheet submittal acceptance. Contact Logix to discuss control requirements not described herein. Custom features may result in additional cost and longer lead time.

Completed by _____ Date _____

1. General

- a. Number Designation (e.g., C3) _____
- b. Package Manufacturer/Model No. _____
- c. Compressor Manufacturer/Model No. _____
- d. Existing Control Micro Manufacturer/Model Type. _____
- e. Digital Input / Output control voltage (*choose one*)
 - 120VAC
 - 240VAC
- f. Logix RCS Integration (If applicable)
 - i. Facility Name and Location _____
 - ii. Logix Job # _____

2. Engineering Units (*choose one*)

- US PSIG °F
- Canadian PSIG °C
- Bar °C
- kgcm °C
- kPa °C

3. Refrigerant Type (*choose one*)

- R-717 Ammonia
- R-22 Freon

4. AC Electric Motor (*choose one*)

- Single Speed (20-minute fixed anti-cycle duration)
- Variable Speed (4-20ma speed reference control)

5. Temperature Sensor Configuration (*choose one per sensor*)

- | | | | |
|-----------------------|-------------------------------------|---------------------------------------|-------------------------------------|
| Oil Temperature | <input type="radio"/> 4" Thermowell | <input type="radio"/> 2.5" Thermowell | <input type="radio"/> Surface Mount |
| Oil Sump Temperature | <input type="radio"/> 4" Thermowell | <input type="radio"/> 2.5" Thermowell | <input type="radio"/> Surface Mount |
| Discharge Temperature | <input type="radio"/> 4" Thermowell | <input type="radio"/> 2.5" Thermowell | <input type="radio"/> Surface Mount |
| Suction Temperature | <input type="radio"/> 4" Thermowell | <input type="radio"/> 2.5" Thermowell | <input type="radio"/> Surface Mount |

6. Motor Current Monitoring (*choose one*)

- 5 Amp signal from Current Transformer (supplied by others)
- 4-20ma signal from VFD or Other Device (signal isolator provided by Logix at additional cost)

7. Oil Lubrication (*choose one*)

- No Oil Pump (choose one)
 - Standard Differential Lube (low oil level switch terminates on standard auxiliary shutdown input)
 - Bitzer OS.85 (oil cap/flow switch/stop valve)
- Electric Continuous Lube
- Electric Pre-Lube
- Shaft/Gear Driven (no electric pump, typical of Sullair)
- Both Shaft/Gear Driven and Electric Pre-Lube

8. Net Oil Pressure Measurement (*choose one*)

- Always Above Discharge
- Always Above Suction
- Above Discharge when starting and above Suction when Running
- Other (specify)

9. Number of Pressure Transducers on Compressor Package (*choose one*)

- 3 Transducers (Typically Frick e.g., RXB & RXF)
- 4 Transducers (Normal)
- 5 Transducers (Typically FES)

10. Oil Filter Configuration (*choose one*)

- Filter Before Oil Pump
- Filter After Oil Pump
- No Oil Filter Sensor
- 2nd Filter Pressure Sensor (includes additional 0-300PSIG sensor)

11. Oil Cooling (all devices are controlled by oil temperature)

- Liquid Injection Solenoid - standard
- Passive or external control (e.g. oil cooler)
- Additional Options
 - Motorized Valve with 4-20ma control (24V power provided)
 - Pulse Width Modulation Valve – Hansen
 - Pulse Width Modulation Valve - Mycom Yosaku

12. Capacity Control Target (*choose one*)

- Suction Pressure
- Process Temperature

13. Capacity Control (*choose one*)

- Slide Valve Actuation with Load/Unload digital output pair (choose one)
 - Hydraulic
 - Motorized
 - Energize unload solenoid to hold position (e.g. Howden XRV)
 - Unload spring return - oil pump not required for slide valve unload
- Solenoid Valve Step Control (choose one)
 - Frick - 3 solenoid valves
 - Bitzer OS.85 – 3 solenoid valves

14. Slide Valve Position Measurement (*choose one*)

- 500 – 10K ohm (typical 1000 ohm) potentiometer
- 4-20ma linear position indicator
- Sabroe 4-20 ma
- Vilter Optical (electrical snubbers provided by Logix)

15. Automatic Variable VI Control (*choose one*)

- No Variable VI
- Slide Stop Position Measurement (choose one - electrical snubbers provided by Logix)
 - 500 - 10K ohm (typical 1000 ohm) potentiometer
 - 4-20ma linear position indicator
 - Vilter Optical
- Frick 2 solenoid/3-step VI

16. Economizer Solenoid Yes No

17. Bearing Balance Solenoid (e.g. Kobe) Yes No

Logix CCS Product Specification

- Hardware
 - ✓ Powder-coated steel enclosure UL-C Listed, NEMA 4X Rated, with vibration dampeners
 - ✓ Proven Industrial-Grade Microcontroller
 - ✓ Emergency Stop Mushroom Button
 - ✓ 8.4" Color Touchscreen provides at-a-glance status and intuitive menu parameter access
- Control Features
 - ✓ Suction Pressure Capacity Control
 - ✓ Warning-Shutdown Parameters with factory-set limits
 - ✓ Ramped Alarm Parameter Startup
 - ✓ Forced Unload Protection – Discharge Pressure and Motor Amperage
 - ✓ 48-Hour Data and Event Logging
 - ✓ 8-Level Password Protection
 - ✓ Four Operating Parameter Groups with Auto-Schedule Change
- Digital Outputs (solid-state, 1.5 amp max continuous load @120VAC)
 - ✓ Motor Starter/VFD Run Enable
 - ✓ Oil Pump Motor Starter
 - ✓ Slide Valve Load and Unload (includes 2 electrical snubbers)
 - ✓ General Alarm
 - ✓ Liquid Injection Solenoid (controlled by oil temperature)
 - ✓ Sump Oil Heating (two 10 amp isolated contacts provided)
- Digital Inputs
 - ✓ Motor Operation Readback
 - ✓ Emergency Stop
 - ✓ Two (2) Aux Shutdowns with adjustable trip delay (e.g. high-level float, low oil level)
 - ✓ Remote Start/Stop and Setpoint Group Select (changes operating parameters group)
- Analog Inputs (sensors provided)
 - ✓ Suction/Discharge/Oil/Oil Filter Pressure: stainless steel, 1/4" NPT threading, 2 stainless steel pressure snubbers included, 0 - 215PSIA suction range, 0 - 300PSIG all others
 - ✓ Suction/Discharge/Oil/Oil Sump Temp: 4" stainless steel thermowell, 1/2" NPT threading, -50 - 125F suction range, 0 - 300F all others
 - ✓ Current Transmitter (5 amp current transformer not provided)
 - ✓ Slide Valve (position indication equipment not provided)

- Fixed Parameter Adjustment Limits (provide different values, if required)
 - ✓ High Discharge Pressure (225 PSIG)
 - ✓ High Discharge Temperature (212°F)
 - ✓ Low NET Oil Pressure (20 PSID)
 - ✓ High NET Oil Pressure (300 PSID)
 - ✓ Low Oil Temperature (80°F)
 - ✓ High Oil Temperature (175°F)

Describe Other Custom Control (consult Logix for pricing)