DUPLEX/TRIPLEX/QUADRAPLEX CONTROL PANEL for OIL-LESS AIR COMPRESSORS

1 NEMA Type 12 Enclosure
2 (2) Fusible Disconnects/Switches
3 (2) Magnetic Contactors w/Overload Relay Protection and Door Mounted Reset.
4 (2) Control Circuit Transformers w/Fused Primary & Secondary and Flip-Flop Relay
5 (2) Amber Power on Pilot Lights
6 (1) Amber Transformer Failure Pilot Light
7 (1) Automatic Duplex Alternator
8 (2) Test-Off-Auto Selector Switches, Spring Return from Test to Off

MASTER LAMP TEST
TIMED TANK DRAIN

9 (1) Auto-Compressor #1-Compressor #2 Selector Switch
10 (2) Elapsed Time Meters
11 (2) Green Compressor Run Pilot Lights
12 (2) Red High Temperature Pilot Lights
13 (1) Door Mounted High Temperature Switch Reset
14 (1) Green Lag Unit Run Pilot Light
15 (1) Start-Up Timer (lag unit)
16 (1) Alarm/Horn w/Silencer Button (high temp. & lag unit run)
17 Control Wire Terminal Block

Standard panel components meet current NFPA 99-96 minimum standards.

Enclosure Dimensions:

H 31 1/2" W 19 1/2" D 6 1/2"
SEQUENCE OF OPERATION (Duplex Control System Described)

The Champion Medi-Trol Sequencing System can provide automatic alternation of the compressors for an equal amount of operating time on each.

With both fusible disconnects in the “ON” position, and the Auto-Compressor #1-compressor #2 switch in the “Auto” position, turn both Test-Off-Auto Selector switches to the “Auto” position. Both compressors will start and run until the cut-out setting of the two pressure switches are reached. The Lead (Pressure Switch #1) and Lag (Pressure Switch #2) have the same cut-out pressure, but the Lag pressure switch has a 10 PSIG lower cut-in setting than the Lead pressure switch. As the pressure drops and reaches the cut-in setting of the Lead pressure switch, compressor #1 starts and will run until the cut-out setting of the Lead pressure switch is reached. The next time the pressure drops to the cut-in setting of the Lead pressure switch, compressor #2 will start and run until the cut-out setting of the Lead pressure switch is reached. The compressors will continue to alternate in this manner as long as the Auto-Compressor #1-Compressor #2 switch is in the “Auto” position.

When the Auto-Compressor #1-Compressor #2 switch is in the “Compressor #1” position, compressor #1 will start and run every time the cut-in setting of the Lead pressure switch is reached. When the Auto-Compressor #1-Compressor #2 switch is in the “Compressor #2 position, compressor #2 will start and run every time the cut-in setting of the Lead pressure switch is reached. In either of these modes, the compressors will not alternate.

Regardless of the position of the Auto-Compressor #1-Compressor #2 switch, if the compressor that is running cannot maintain the air demand and the pressure continues to drop, the second compressor will start when the cut-in setting of the Lag pressure switch is reached. Both compressors will run until the cut-out setting of both pressure switches are reached.

The Medi-Trol Sequencing System includes visual and audible alarms for high discharge air temperature and lag unit (second compressor) running. A start-up timer allows both compressors to run during initial start-up without having an alarm condition. The audible alarm can be silenced by pressing the “Silence” button.

CHAMPION
A Gardner Denver Company
1301 N. Euclid Ave. • Princeton, Illinois 61356-9990 • Phone 815-875-3321 • FAX 815-872-0421
Manufacturing Plants in Princeton, Illinois • Manteca, California
Copyright Champion Pneumatic Machinery Co., Inc. 1996