High Efficiency Air Compressor & Vacuum Pump Controlling -- Universal Autodual
Simplex and Multiple Unit Systems
Effective January 2012

Convert Reciprocating and Rotary Compressors to Automatic Dual Control for High Efficiency Operation!

For Models
AS-2, AS-3, UASPT, AD, ADS, ADSE, ADSE-3, ASPSS, and Accessories

Model AutoSync-2
Model ADS
Model ADS
Model AD
Model ADSE
Model ASPSS

See our website www.stdpneumatics.com for our complete catalogue, engineering details and installation photos.

Standard Pneumatic Products, Inc. 31 Shepard Hill Rd. Newtown, CT 06470
Phone: 203-270-1400 Fax: 203-270-3881 Email: sales@stdpneumatics.com
Website: www.stdpneumatics.com
Automatic Lead/Lag Control
Two Rotary or Reciprocating Compressors
of any size or make with the

UNIVERSAL AUTOSYNC – MODEL AS-2

Overview
The AutoSync-2 sequencer is designed to work with any two rotary or reciprocating compressors with powered pressure switches currently controlling the starter coils. When properly installed, the Universal AutoSync-2 will operate both compressors in either manual or automatic lead/lag control and provide efficient operation and lead/lag cycling of both compressors. Automatic Lead/Lag Control is field adjustable to “alternate” lead machines anywhere from a 10 min to 7 day swap cycle. You can also select specific operating periods for one compressor. Example: Use smaller HP compressor to lead on 3rd shift only.

Installation
The AutoSync-2 is supplied with a terminal block for connection between the compressor pressure switches and the compressor starter coil. Additionally, a 110v plug can be provided to operate the internal relay, automatic timer, and the pressure switch and starter coil. The starter must have a 110v or 230v coil regardless of main input power.

Universal AutoSync-2
Operate your compressor plant intelligently and at its MAXIMUM LEVEL OF EFFICIENCY with the Universal AutoSync

Input Power 1/60/115v or 1/60/230v
Compressor Coil Voltage 1/60/115v or 1/60/230v
UNIVERSAL AUTOSYNC
GENERAL LEAD/LAG CONFIGURATION
WIRE ROUTING

COMPRESSOR 1 PRESSURE SWITCH
GRN & WHT WIRES
RED/BLK WIRES
CONNECTION TO COMPRESSOR 1 STARTER COIL
INPUT POWER FROM DISCONNECT 110 VAC ONLY

110 VAC IN FUSE 6A

CONNECTED TO

COMPRESSOR 1 Operating Hours
COMPRESSOR 2 Operating Hours

MANUAL OVERRIDE COMP 1 LEAD COMP 2 LEAD
COMP 1 LAG (ON) COMP 2 LAG (ON)

AUTO LEAD/LAG ON (HP)

Universal AutoSync
Dual Compressor Sequencing Controller
STANDARD PNEUMATIC PRODUCTS
Newtown, CT 06470 Made in USA
www.autosyncc.com

CONNECTED TO

COMPRESSOR 2 PRESSURE SWITCH
GRN & WHT WIRES
RED/BLK WIRES
CONNECTION TO COMPRESSOR 2 STARTER COIL
INPUT POWER FROM DISCONNECT 110 VAC ONLY
Lead/Lag Control Three Rotary or Reciprocating Compressors
Manual Selection 3-Way Lead/Lag Control

UNIVERSAL AUTOSYNC - MODEL AS-3

Overview
The AutoSync-3 sequencer is designed to work with any three rotary or reciprocating compressors with powered pressure switches currently controlling the starter coils. When properly installed, the UAS-3 will operate three compressors in manual control and provide efficient operation and lead/lag cycling of all three compressors. The lead/lag cycle is by manual selection only.

Installation
The AutoSync-3 is supplied with a terminal block for connection between the three compressor pressure switches and the compressors’ starter coils. Additionally, a 110v plug can be provided to operate the internal relay, automatic timer, and the pressure switch and starter coil. The starter must have a 110v starter coil.

Input Power 1/60/115v
Compressor Coil Voltage 1/60/115v

Universal AutoSync-3

UNIVERSAL AUTOSYNC 3 LEAD/LAG CONFIGURATION WIRE ROUTING
The lead/lag function is accomplished by the automatic switching of the controller pressures bracketing the non-accessible compressor permanent pressure setting. The UASPT controller is simple to install and brilliant and foolproof in function.

The non-accessible compressor is typically a rotary screw machine that has the Pressure Transducer and all controls enclosed in a circuit board. This precludes any lead/lag attachments from an outside source.

The accessible compressor is typically a machine that is controlled by a mechanical pressure switch.

The hour meter records the “on” time for the accessible compressor.

Compressor loaded light indicates when the compressor is pumping.

The operator can by-pass the auto lead/lag function by selecting the Compressor 1 lead or Compressor 2 lead position on the panel.
Standard Pneumatic Products, Inc.
31 Shepard Hill Rd, Newtown, CT 06470  Website:  www.stdpneumatics.com
Phone: 203-270-1400  Fax: 203-270-3881  E-mail:  sales@stdpneumatics.com

“Saving the planet, one compressor at a time”

Effective January 2012

MODEL AD

Universal AutoDual
High Efficiency Air Compressor Management System
with Pressure Transducer (for Rotary or Recip Compressors)

UNIVERSAL AUTODUAL® Standard Features:
- Automatic Dual Control – Timed out 4-20 mins/Start-Stop Control
- 5-Second Automatic Initial Unloading Delay**
- Hour Meter with Compressor Loaded Lite
- Power On-Off Switch, Illuminated
- Pressure Transducer Adjustable from 50-150 psig, Adjustable Differential +/-0.5%
- 1/4” NPT Bottom Connection for Control Air In
- 1/4” NPT Connection for control air to compressor unloaders
- U.S. Patented, UL Listed

** Please specify compressor type when ordering.

Model AD

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD115</td>
<td>AutoDual 115 Volt - includes Pressure Transducer, for 150 psig max operating pressure</td>
</tr>
<tr>
<td>AD230</td>
<td>AutoDual 230 Volt - includes Pressure Transducer, for 150 psig max operating pressure</td>
</tr>
</tbody>
</table>

Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-PT-MP</td>
<td>Pressure Transducer (Accuracy: +/-½ psi) - Medium Pressure from 150 to 300 psi</td>
</tr>
<tr>
<td>-PT-HP</td>
<td>Pressure Transducer (Accuracy: +/-½ psi) - High Pressure to 1500 psi</td>
</tr>
<tr>
<td>-TD</td>
<td>Timed Tank Drain - Blows the electric solenoid for 5, 10 or 20 seconds, (front panel selectable) for every hour of COMPRESSOR PUMPING TIME. Includes front panel mounted manual test button. Drain option supplied with 6’ Power Cord &amp; DIN connect ¼” NPT 115 or 230V solenoid.</td>
</tr>
<tr>
<td>-TDPS</td>
<td>With Pre-Strainer</td>
</tr>
<tr>
<td>-ES</td>
<td>Emergency Shutdown - Adaptable to normally closed (N/C) low oil pressure, low oil level or high air temperature. Quick connect to controller.</td>
</tr>
<tr>
<td>-LOP</td>
<td>Low Oil Pressure (LOP) Shutdown Switch - Used with Emergency Shutdown above. Activates Shutdown signal if oil pressure drops below 10 PSI.</td>
</tr>
<tr>
<td>-RS</td>
<td>Remote Signal for Emergency Shutdown - Sends remote shutdown signal (24VDC 40ma) to control room console, low voltage relay, etc.</td>
</tr>
<tr>
<td>-N4</td>
<td>NEMA 4 Enclosure - Standard AD-115/230 Unit sub packaged in watertight NEMA 4 housing with clear Lexan™ enclosure face.</td>
</tr>
<tr>
<td>-DT</td>
<td>Daytimer - Programmable timer for one or two compressors to shut down the machines selectively nights or weekends. AD Controller requires repackaging in a 12” x 12” enclosure.</td>
</tr>
</tbody>
</table>
Model AD
Universal Autodual
High-Efficiency Air Compressor Controller
General Arrangement

- Liquid Filled Pressure Gauge
- Pressure Adjust
- Hour Meter
- Manual Drain & Drain Time Duration
- Electrical Lead to Emergency Shutdown
- Electrical Lead to Starter coil
- Power In
- Air In to Controller
- Starter & Overload
- Mini Filter
- Solenoid Drain Valve (Optional)
- Control Air to Head Unloader (Inlet Valve on Recip)
UNIVERSAL AUTODUAL® ADS Standard Features:
- Automatic Dual Control – Timed out 4-20 mins/Start-Stop Control
- 5 Second Automatic Initial Unloading Delay**
- Hour Meter with Compressor Loaded Lite
- Power On-Off Switch, Illuminated
- Pressure Transducer Adjustable from 50-150 psig. Adjustable Differential +/-0.5%
- Liquid-filled, Stainless Steel Case Pressure Gauge, 0-300 psig
- 1/4” NPT Bottom Connection for Control Air In
- 1/4” NPT Connection for control air to compressor unloaders
- Operates on 3Ø 60Hz 200/208/230/460/575 VAC, IEC Starter/Overload
- US Patented, UL Approved
** Please specify compressor type when ordering.

MODEL ADS
Universal AutoDual Starter Combination
High Efficiency Air Compressor Management System with Pressure Transducer
(for Rotary or Recip Compressors)

UNIVERSAL AUTODUAL® ADS Standard Features:
- Automatic Dual Control – Timed out 4-20 mins/Start-Stop Control
- 5 Second Automatic Initial Unloading Delay**
- Hour Meter with Compressor Loaded Lite
- Power On-Off Switch, Illuminated
- Pressure Transducer Adjustable from 50-150 psig. Adjustable Differential +/-0.5%
- Liquid-filled, Stainless Steel Case Pressure Gauge, 0-300 psig
- 1/4” NPT Bottom Connection for Control Air In
- 1/4” NPT Connection for control air to compressor unloaders
- Operates on 3Ø 60Hz 200/208/230/460/575 VAC, IEC Starter/Overload
- US Patented, UL Approved
** Please specify compressor type when ordering.

Model ADS

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-A</td>
<td>AutoDual Starter Combination 7-22 Amps</td>
</tr>
<tr>
<td>ADS-B</td>
<td>AutoDual Starter Combination 23-34 Amps</td>
</tr>
<tr>
<td>ADS-C</td>
<td>AutoDual Starter Combination 34-62 Amps</td>
</tr>
<tr>
<td>ADS-D</td>
<td>AutoDual Starter Combination 63-80 Amps</td>
</tr>
<tr>
<td>ADS-E</td>
<td>AutoDual Starter Combination 92 Amps</td>
</tr>
</tbody>
</table>

Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-PT-MP PT-HP</td>
<td>Pressure Transducer – Medium Pressure from 150 to 300 psi Pressure Transducer – High Pressure to 1500 psi</td>
</tr>
<tr>
<td>-TD</td>
<td>Timed Tank Drain - Blows the electric solenoid for 5, 10 or 20 seconds, (front panel selectable) for every hour of COMPRESSOR PUMPING TIME. Includes front panel mounted manual test button. Drain option supplied with 6’ Power Cord &amp; DIN connect 1/4” NPT 115V solenoid. Quick connect to controller. With Pre-Strainer</td>
</tr>
<tr>
<td>-TDPS</td>
<td>Timed Tank Drain - Blows the electric solenoid for 5, 10 or 20 seconds, (front panel selectable) for every hour of COMPRESSOR PUMPING TIME. Includes front panel mounted manual test button. Drain option supplied with 6’ Power Cord &amp; DIN connect 1/4” NPT 115V solenoid. Quick connect to controller. With Pre-Strainer</td>
</tr>
<tr>
<td>-ES</td>
<td>Emergency Shutdown - Adaptable to a normally closed (N/C) low oil pressure, low oil level or high air temperature switch. Quick connect to controller.</td>
</tr>
<tr>
<td>-LOP</td>
<td>Low Oil Pressure (LOP) Shutdown Switch - Used with Emergency Shutdown above. Activates Shutdown signal if oil pressure drops below 10 PSI.</td>
</tr>
<tr>
<td>-RS</td>
<td>Remote Signal for Emergency Shutdown - Sends remote shutdown signal (24VDC 40ma) to control room console, low voltage relay, etc.</td>
</tr>
<tr>
<td>-ML3</td>
<td>Manual Lead-Lag Control for 3 Compressors - Manual Lead/Lag selection between 3 compressors. (3 Autoduals required)</td>
</tr>
<tr>
<td>-ALL</td>
<td>Automatic Lead-Lag Switching - Cycles 2 compressor systems to equally share plant air requirements. Alternates Lead Compressor function between 2 compressors. Lead/Lag Delay is field adjustable between 10min - 7 Days. Includes manual override to “lock” either compressor in lead mode. (2 Autoduals required)</td>
</tr>
<tr>
<td>DT</td>
<td>Daytimer – Programmable timer for two compressors to shut down the machines selectively nights or weekends.</td>
</tr>
</tbody>
</table>
# MODEL ADSE

Single Enclosure Lead/Lag Control for Two Compressors (Rotary or Recip)
High Efficiency Air Compressor Management System with Pressure Transducer

**UNIVERSAL AUTODUAL® ADSE** Standard Features:
- Manual Lead/Lag Standard; Automatic Lead/Lag Optional
- Dual Automatic Dual Control – Timed out 4-20 mins/Start-Stop Control
- Dual 5-Second Automatic Initial Unloading Delay
- Dual Hour Meters with Compressor Loaded Indicators
- Dual Power On-Off Switch, Illuminated
- Pressure Transducer Adjustable from 50-150 psig, Adjustable Differential +/-0.5%
- Pressure Indication from Pressure Transducer Display
- 1/4” NPT Bottom Connection for Control Air In
- Two 1/4” NPT Connections for Control Air to Compressor Unloaders
- Platform or Wall Mounting
- US Patented, UL Listed

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSE115</td>
<td>Autodual Single Enclosure Lead/Lag Control for Two Compressors, 115 Volt, includes Manual Lead/Lag Selection</td>
</tr>
</tbody>
</table>

**Options**

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-PT-MP</td>
<td>Pressure Transducer - Medium Pressure from 150 to 300 psi</td>
</tr>
<tr>
<td>-PT-HP</td>
<td>Pressure Transducer - High Pressure to 1500 psi</td>
</tr>
<tr>
<td>-TD</td>
<td>Timed Tank Drain - Blows the electric solenoid for 5, 10 or 20 seconds, (front panel selectable) for every hour of COMPRESSOR PUMPING TIME. Includes front panel mounted manual test button. Drain option supplied with 6’ Power Cord &amp; DIN connect 1/4” NPT 115V solenoid. Price listed is PER TANK -- 2 required for dual tanks.</td>
</tr>
<tr>
<td>-TDPS</td>
<td>With Pre-Strainer</td>
</tr>
<tr>
<td>-ES</td>
<td>Emergency Shutdown - Adaptable to low oil pressure, low oil level or high air temperature. (Price shown for two, to have ES control on both compressors)</td>
</tr>
<tr>
<td>-LOP</td>
<td>Low Oil Pressure (LOP) Shutdown Switch - Used with Emergency Shutdown above. Activates Shutdown signal if oil pressure drops below 10 PSI. (Price shown for 1 compressor)</td>
</tr>
<tr>
<td>-RS</td>
<td>Remote Signal for Emergency Shutdown - Sends remote shutdown signal (24VDC 40ma) to control room console, low voltage relay, etc.</td>
</tr>
<tr>
<td>-ALL</td>
<td>Automatic Lead-Lag Switching - Cycles 2 compressor systems to equally share plant air requirements. Alternates Lead Compressor function between 2 compressors. Delay is field adjustable between 10min - 7 Days. Includes manual override to “lock” either compressor in lead mode.</td>
</tr>
<tr>
<td>-DT</td>
<td>Daytimer – Programmable timer for two compressors to shut down the machines selectively nights or weekends.</td>
</tr>
</tbody>
</table>
MODEL ADSE-3

Single Enclosure Lead/Lag Control for Three Compressors (Rotary or Recip)
High Efficiency Air Compressor Management System with Pressure Transducers

UNIVERSAL AUTODUAL® ADSE-3 Standard Features:

- Manual 3-Way Lead/Lag Selection
- Automatic Dual Control – Timed Out to Stop Control – Adjustable 4 to 20 mins. Idle Time for Each Compressor
- 5-Second Automatic Initial Unloading Delay
- Three Hour Meters with Compressor Loaded Indicators
- Three Power On-Off Switches, Illuminated
- Three Pressure Transducers Adjustable from 50-150 psig, Adjustable Differential +/-0.5%
- Liquid-filled, Stainless Steel Case Pressure Gauge, 0-300 psig, for System Pressure
- 1/4” NPT Bottom Connection for Control Air In
- Three 1/4” NPT Connections for Control Air to Compressor Unloaders. Optional - Electric Signals for Solenoid Controlled Inlet Valves
- Platform or Wall Mounting
- US Patented

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSE3-115</td>
<td>Autodual Single Enclosure Lead/Lag Control for Three Compressors</td>
</tr>
</tbody>
</table>

Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-PT-MP</td>
<td>3 Pressure Transducers - Medium Pressure from 150 to 300 psi</td>
</tr>
<tr>
<td>-PT-HP</td>
<td>3 Pressure Transducers - High Pressure to 1500 psi</td>
</tr>
<tr>
<td>-ES</td>
<td>Emergency Shutdown - Adaptable to low oil pressure, low oil level or high air temperature.</td>
</tr>
<tr>
<td>-LOP</td>
<td>Low Oil Pressure (LOP) Shutdown Switch - Used with Emergency Shutdown above. Activates Shutdown signal if oil pressure drops below 10 PSI. (</td>
</tr>
<tr>
<td>-RS</td>
<td>Remote Signal for Emergency Shutdown - Sends remote shutdown signal (24VDC 40ma) to control room console, low voltage relay, etc.</td>
</tr>
</tbody>
</table>
Universal Autodual® Model ASPSS Standard Features:

- Universal Autodual Control for two, three or four compressors. Timed-out-to-stop automatic dual control, field adjustable, for one minute to 30 minutes idle period to stop. Switch selectable for start/stop control.
- AutoSmart -- Automatic selection of either start/stop control or automatic dual control depending on plant load requirements. True hands-off operation for max efficiency operation of the multiple compressor system.
- Fully unloaded soft starts, field selectable from 1-20 seconds
- Hour Meters with compressor loaded indicator lights
- Power On/Off Switches
- Pressure Transducer Pressure Control. Adjustable differential. Range: (A) 15-150psi; (B) 30-300psi; (C) 200-1500psi. Accuracy +/-0.5%.
- Automatic Lead-Lag Switching - Cycles 2, 3 or 4 compressor systems to equally share plant air requirements. Alternates Lead Compressor function between compressors on the clock. Delay is field adjustable between 10min - 7 Days. Lag compressor starts on pressure deterioration due to high air demand and idles to stop when satisfied. Includes manual override to "lock" any compressor in lead mode.
- Emergency shutdown for each compressor. Adapts to LOP, LOL or HAT.
- Remote Signal for Emergency Shutdown - Sends remote shutdown signal (24VDC 40ma) to control room console, low voltage relay, etc.
- Includes I.E.C. Starter/Overloads for each compressor for 3/50/60/200/208/460/575 VAC.
- Maximum hp each starter/overload 60hp, 460v.
- 50 VA CVT included.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPSS-2</td>
<td>Autodual Single Enclosure Automatic Alternator for Two Compressors</td>
</tr>
<tr>
<td>ASPSS-3</td>
<td>Autodual Single Enclosure Automatic Alternator for Three Compressors</td>
</tr>
<tr>
<td>ASPSS-4</td>
<td>Autodual Single Enclosure Automatic Alternator for Four Compressors</td>
</tr>
</tbody>
</table>

Options

- **-PT-MP**
  - Pressure Transducer - Medium Pressure from 150 to 300 psi
- **-PT-HP**
  - Pressure Transducer - High Pressure to 1500 psi
- **-TD**
  - Timed Tank Drain - Blows the electric solenoid for 5, 10 or 20 seconds, (front panel selectable) for every hour of COMPRESSOR PUMPING TIME. Includes front panel mounted manual test button. Drain option supplied with 6’ Power Cord & DIN connect ¼” NPT 115V solenoid.
- **-TDPS**
  - With Pre-Strainer
- **-LOP**
  - Low Oil Pressure (LOP) Shutdown Switch - Used with Emergency Shutdown above. Activates Shutdown signal if oil pressure drops below 10 PSI.
- **-DT**
  - Daytimer – Programmable timer for two compressors to shut down the machines selectively nights or weekends.
- **-VC**
  - Voltage Conditioner – Automatic voltage regulation automatically steps up low voltage and steps down high voltage: lightning and surge protection to prevent damage to your equipment from power surges and spikes; resettable circuit breaker for easy recovery from overloads (no need to replace a fuse).
Compressor Controls Accessories

Autodual Pilot Operated Atmospheric Discharge Unloader Valve – For Recip Compressors without Head Unloaders 15 hp and Smaller and Sump Relief Valves on Rotary Compressors

For Pressures Up to 200 psi and 400°F

<table>
<thead>
<tr>
<th>DISCHARGE UNLOADER VALVE</th>
<th>DISCHARGE MUFFLER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Pipe Size</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>CVD4</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>CVDL</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>ADUK-100</td>
<td>1&quot;</td>
</tr>
</tbody>
</table>