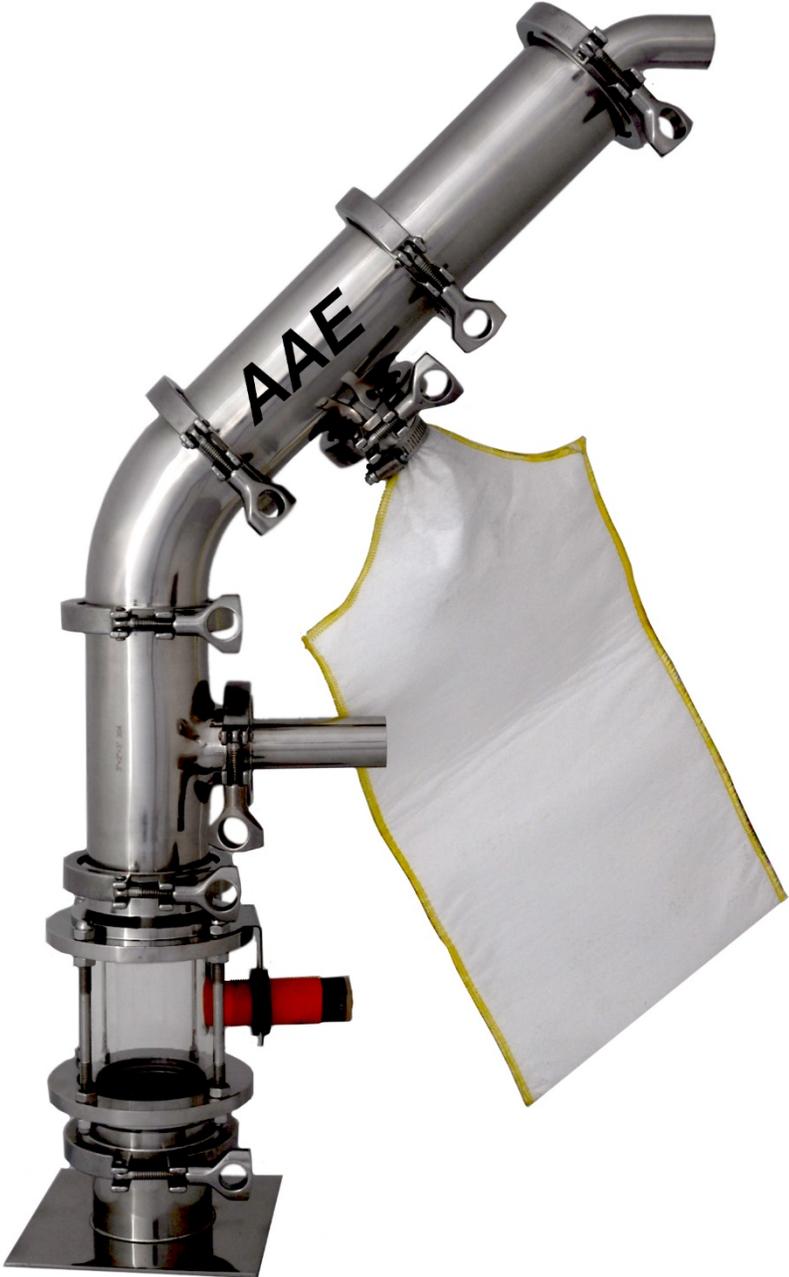


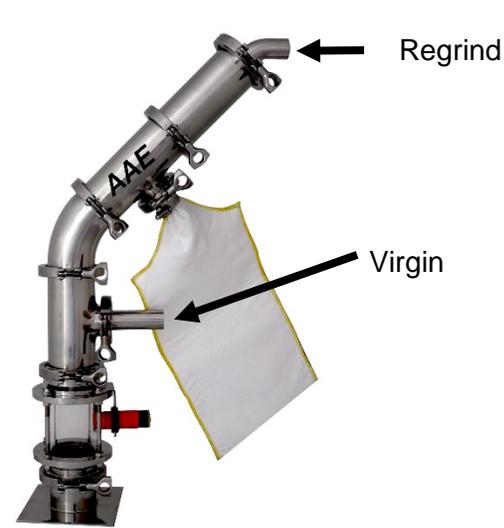
**Operation Manual
CAD-2 Series Loader**

AAE



Operation Manual CAD-2 Series Loader

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**Drying Hopper
Adaptor**



Compressed Air



3 In One Wand

Stainless wand

Grinder Spike

Direct connect



**Wand with
Fluidizer**

For difficult materials.

Vibrators are also
available.

PLC Control
Shown with
expanded PLC and
no-load alarm.



Operation Manual CAD-2 Series Loader



PRINCIPALS OF OPERATION

Compressed air is directed to the accelerator on the bottom of the material wand. The accelerator creates a strong airflow that draws material into the wand and blows it to the receiver. Once in the receiver the material falls into the sight glass and the air exits via the air filter. The load cycle is initiated by the level switch and continues until the switch signals full. Fines pass through the perforated tube into the felt bag.

INSTALLATION INSTRUCTIONS

1. Mount compressed air filter regulators on a secure mounting surface within 10 feet of both material sources and the level switch.
2. Securely mount the receiver on the machine flange or magnet.
3. Connect flex hose to the wands and the receiver inlets. Secure with hose clamps.
Note-Always put the clamp on the hose with the screw on the top and the deflector down. You can see from the outside that the deflector is in the correct position.
4. Install material level switch on the sight glass in the top position. Connect switch to control with supplied cable.
5. Connect 3/8 inch compressed air hose to the solenoid valves and accelerators. Slide the compressed air hose inside the vent tube on the material wand and over the accelerator tube on the bottom.
6. Set Compressed air pressure at 50 PSI to start.
7. Make sure that system is properly grounded. Monitor for presence of static electricity and ground system to prevent discharge.

OPERATING INSTRUCTIONS

Do not jam wands into material. They will draw into the material as they start to load. If material fails to flow pull the wand out slightly and flow will start again.

Adjust compressed air pressure as needed for good conveying. Compressed air pressure normally will be between 40 and 80 PSI. Lower compressed air consumption by operating at the lowest compressed air pressure that result in reliable material transfer.

Extend control relay life by reducing material cycling and filter pulse to minimize cycles.

General Maintenance

Super-Flex Loaders require inspection and observation to prevent failure. Inspect the following items as needed. If defects or potential contamination is observed discontinue use until repaired.

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Filters – Filters fail due to imbedded particles over time. The smaller the particles being conveyed the shorter the filter life will be. Moisture also can cause premature filter failure. The filter should be clean at all times. Clogged filters waste compressed air and eventually cause loading failure. Inspect filters on a regular basis and clean as necessary. Clean by blowing compressed air from the outside of the filter toward the center. Wear proper safety equipment, including eye protection, when cleaning with compressed air. If filter cannot be cleaned replace the filter as needed. Inspect filter for wear and possible contamination and replace as necessary.

Compressed Air Filter – The useful life of the compressed air filters is dependent on the quality of the supplied compressed air. Check compressed air filters and replace as needed.

Flex Hose – Inspect Flex Hose for wear and possible contamination as needed. The life of Flex Hose will be less with abrasive material. Check for contamination in Flex Hose caused by material. Replace and repair flex hose as needed.

Gaskets and Seals – Make sure gaskets and seals are properly installed. Inspect as needed for wear and replace as needed.

Material Deflector and Clamped Hose Tube - Inspect for wear as needed. If wear is observed replace.

Material Wand and Accelerator – Inspect Material Wand and Accelerator for wear and possible contamination as needed. The life of Material Wand and Accelerator will be less with abrasive material. Check for contamination in Material Wand and Accelerator caused by material. Replace and repair Material Wand and Accelerator as needed.

Static Electricity

Static electricity can be generated during conveying plastic materials. Some material can generate dangerous levels of static electricity. Monitor the conveying system for the presence of static electricity. If static electricity is present ground the system too adequately to provide safe operation.

SOFTWARE GENERAL TECO

TECO I/O Screen

IN PUTS (I)
1= MATERIAL SWITCH

OUT PUTS (Q)
1= MATERIAL 1
2= MATERIAL 2, NO-LOAD
3= FILTER
4= BLEND, NO-LOAD
5=NO-LOAD –TECO LARGE

KEY PAD

MODE RUN / STOP

RUN / STOP MODE

The RUN /STOP mode allows the PLC to be powered and programed without operating the loader. In the stop mode there is full access to the program while the loader is not running. The control may revert to the stop mode when idle for a long period of time.

Make sure the control is in the RUN mode for normal operation.

Setting the RUN / STOP mode

In the TECO I/O screen press **ESC**

Cursor down to **RUN**

Select **SEL RUN**

Cursor to **YES**

Select **SEL**

Escape **ESC** back to I/O Screen



SG2-10HR-A



SG2-10HR-A

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SOFTWARE CA6 NAVIGATION

Ease of operation

The CA6 control has many advanced features that are setup by the factory or during initial installation. During normal operation the only variables that are adjusted by operators are the load times. For ease of operation the load time screen comes up automatically for 60 seconds when the control is powered up. Anytime an operator needs to adjust the load time they can simply cycle the control on and off. After the adjustable load time display time expires the control returns to normal operation.

Enter CA6 Navigation Software

From the TECO I/O screen press select **SEL**

Use the **CURSOR UP / DOWN** key to navigate to the desired screen.

When you land on the desired screen press **SEL** to activate that screen



How to change values

Activate the screen by pressing **SEL**.

Use the **cursor keys** to highlight the digit you want to change.

Press **SEL** to enable change. Digit will be under lined.

Use the **UP/DOWN** arrow key to increase or decrease the digit.

Press **OK** to confirm.

Press **ESC** to deactivate screen



SOFTWARE
VERSION

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SOFTWARE

CA6 NAVIGATION

AAE

Setting Load Times

Load time is the amount of time in seconds that a material will load. Set material 2 at 0 if it is not present or you do not want it to load.



Filter Settings

Filter Skip allows the setting of filter cleaning frequency. The filter can be cleaned after every load or filter cleaning can skip a specified number of loads.

Filter Clean Time is the number of seconds spent cleaning the filter. If the pulse is set to clean once every second a filter clean time of 4 will pulse the filter 4 times. (Default 4 seconds)

Filter Pulse On

Filter pulse on is the time that compressed air is on to clean the filter. (Default .4 seconds set in 10ths)

Filter Pulse OFF

Filter pulse off is the time that compressed air is off to recharge the air pressure. (Default .6 seconds set in 10ths)



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SOFTWARE CA6 NAVIGATION

Blend Time

Blend time is the time that compressed air is fed into the sight glass for blending after the load cycle. (Default 2 seconds)

No Load Time

No load time is the delay time to start the alarm after the material switch calls for material. The alarm is reset when the material switch is satisfied. (Default 2 seconds)

Output Assignment

Output assignment is always set at the factory. It is used to manage outputs on the small Control.

No Load Delay On Start

No load delay on start is for when there is a large magnet or hopper under the loader. The no load delay prevents an alarm for a set period of time to allow the hopper to fill. **The delay only occurs on start up.** (Default 10 seconds)

Static Tap

Static Tap is a pulse of air designed to stop material bridging. It can be timed to match the machine cycle.

Static Tap Delay is the time between pulses. (Default 0 seconds)

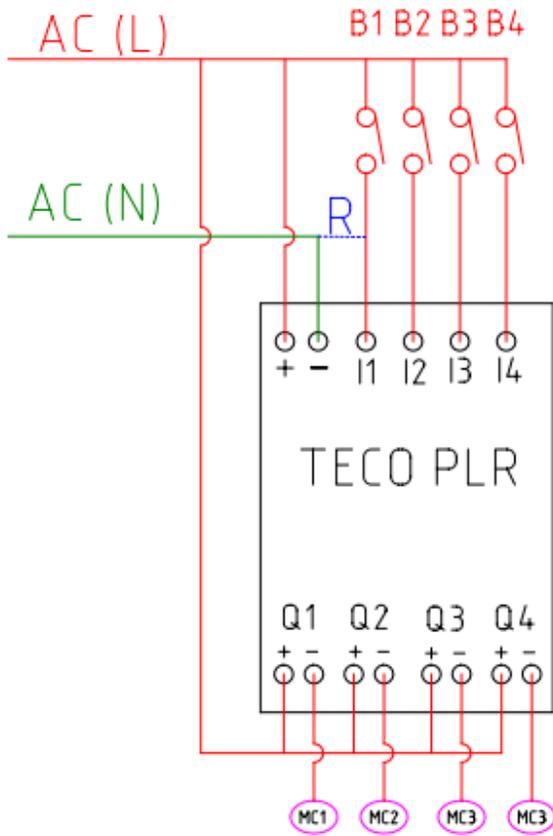
Static Tap On is the time the air is pulsed. (Default .2 seconds set in 10ths)



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Control Schematic



B1 NO MATERIAL SWITCH
B2 NOT USED
B3 NOT USED
B4 NOT USED

M1 MATERIAL 1
M2 MATERIAL 2, NO LOAD
M3 FILTER PULSE
M4 BLEND, NO LOAD

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Trouble Shooting Guide

| Problem | Cause | Solution |
|--|-------------------------------|---------------------------------|
| Not Loading No Compressed Air | No control signal | Identify and repair |
| | No Compressed Air | Identify and repair |
| | Failed Valve | Identify and repair |
| | Level Switch | Adjust or replace |
| Not Loading Compresses Air Present | Clogged Filter Loader | Clean or replace |
| | Clogged Filter compressed air | Clean or replace |
| | Clogged Accelerator | Clear |
| | Excessive Load Time | Reduce load Times |
| | Incorrect deflector position | Turn deflector to down position |
| Reduced Rate | Low air pressure | Increase air pressure |
| | Clogged Filter Loader | Clean or replace |
| | Clogged Filter compressed air | Clean or replace |

CAD PLC Settings



Cycle on and off time

The CAD can be run for long periods of time with many materials. Long load times can be set up to 10 minutes without stopping to clear. Stopping the loader allows the perforated cylinder to clear by gravity.

Some materials separate better when the loader is cycled more frequently.

You can also reduce the load on your compressor by cycling the loader to match your compressed air availability.

Cycle on time is set in seconds. Set from 20 to 9999.

```
CYCLE ON TIME  
D02= 00005  
CYCLE OFF TIME  
D01= 00005
```

CA Delay is the delay time that the compressed air starts after the vac. This allows time for the vac to come up to speed before the material flows.

```
CA DELAY  
D03= 00002  
NO LOAD TIME  
D04= 00025
```

NO-Time is only available on a CADL. The No-Load time is the delay before the no-load alarm sounds if material does not arrive in the sight glass. Set at 10-30 seconds. The only way to turn off the No-Load alarm is to turn the loader off. If you are loading a bin the time can be set to allow time to fill the bin.