ACM-4000

Altronic Compute Module

ACI eRCM Express Application Manual

ALTRONIC

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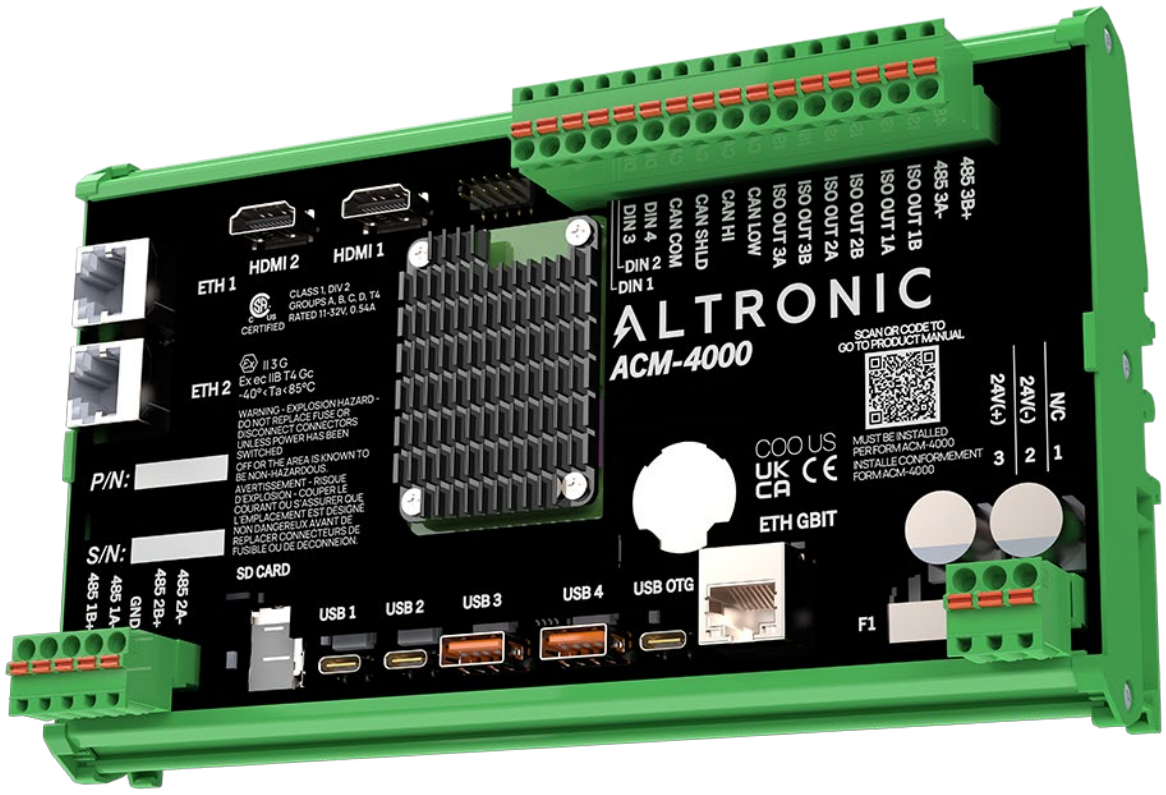

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CLASS I, DIVISION 2,
GROUPS C and D

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FORM ERCM AM 04-26 |

1.0 Overview

WARNING! The eRCM Express software must be properly configured by the operator before use. Incomplete or improper setup may result in the eRCM software returning incorrect or misleading data, which can cause the equipment to operate unsafely even if the system indicates normal status. Always verify that setup is complete and parameters are entered correctly before operating the equipment.

Complete all of the steps in this manual to configure the eRCM Express software.

2.0 Step 1: Set Up eRCM for a Specific Compressor

To set up eRCM Express for a specific compressor, email the appropriate performance file to altronic.support@altronic-llc.com:

OEM	Required Performance File	
Ariel	*.RUN file	Ariel's Ariel Performance file
Cooper (Ajax, Cooper Bessemer, Gemini, Superior)	*.GEPF file	Cooper's PowerFlow file
Dresser-Rand High-Speed	*.DRSP file	Siemens Energy's Dresser-Rand Performance file
CiP	*.NGSGP file	NGSG's CiP III file
Knox Western	*.KWP file	Knox Western's Performance file
I-R	*.IRIP file	I-R India's Dresser-Rand Performance file
LeROI	*.LGCS file	LeROI's LRG9 Performance file
Other OEMS (Neuman & Esser, Burchhardt Compression, Nuovo Pignone, D-R Slow-speed)	Please contact the OEM directly to obtain the necessary performance file, and then send it to Altronic.	

3.0 Step 2: Set Up the eRCM Express Software

3.1 Verify the License

The software license file comes in two versions:

- eRCM Express Lite – Standard
- eRCM Express Full (Future Development) – Remote Load Step Control, including automation of load steps (automatically moving up/down load steps as suggested by the eRCM software).

To verify your eRCM license:

1. On the DE-4000/ACM-4000, select the **eRCM button** in the navigation sidebar to open the eRCM screen.

2. If your eRCM screen looks like the setup screen in *Figure 1*: skip ahead to step **3.2 Check the eRCM Viewer File Status and Install It If Necessary on page 3**.

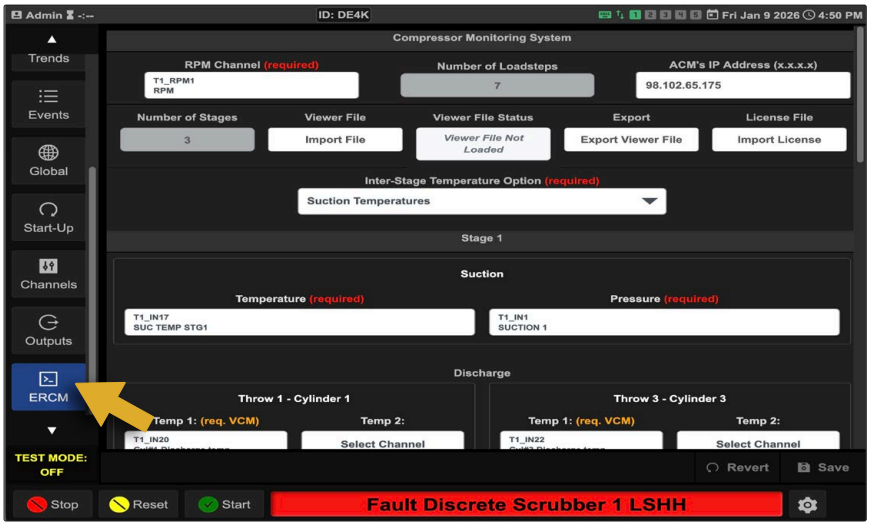

Figure 1

3. If your eRCM screen looks like *Figure 2* and displays the message "Unable to connect to server. Please verify the IP address and try again":
   a. The ACM-4000 ETH GBIT IP address has been changed from **98.102.65.179**, and the DE-4000 cannot connect to the ACI Server, which is stored on the ACM-4000.
   b. To resolve the error: In the **ACM Server IP Address field** below the notification, enter the correct IP address of the ACM-4000 ETH GBIT port, which is where the DE-4000 should connect.
   c. Skip ahead to step **3.2 Check the eRCM Viewer File Status and Install It If Necessary on page 3**.

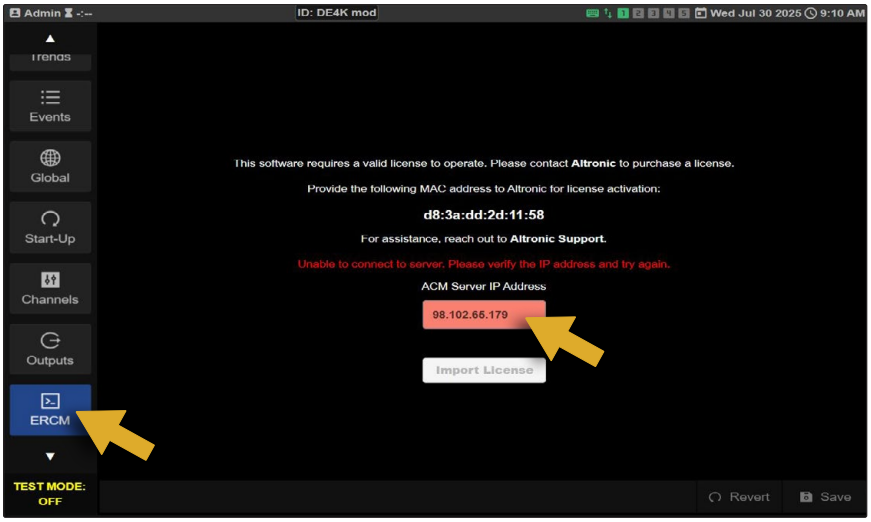

Figure 2

4. **If your eRCM screen looks like *Figure 3***, contact Altronic Sales, sales@altronic-llc.com, to purchase a license.
   a. Note the MAC Address for your ACM-4000 (**2c:cf:67:fd:70:1d** in the example in *Figure 3*); you will need to provide it to purchase the license.
   b. Purchase a Lite or Full license.

Figure 3

   c. Once received, you will need to install the license file:
      i. Locate the license.txt file in your email, and download it to your computer.
      ii. Right-click the file name to change the file extension from **license.txt** to **license.lic**.
      iii. Place the file on a USB flash drive, and plug it into one of the USB ports on the ACM-4000. **NOTE:** Do not plug the flash drive into the USB OTG port.
      iv. Select the **eRCM button** in the navigation sidebar, and select the **Import License button**. If the button is not available, click in the ACM Server IP Address field.
      v. Continue to step **3.2 Check the eRCM Viewer File Status and Install It If Necessary**.

3.2 Check the eRCM Viewer File Status and Install It If Necessary

1. When step 3.1 is complete, you will see the eRCM setup screen. See *Figure 5*. This screen is where you will perform initial setup steps to configure the eRCM Express DE/ACM-4000 System to work with the compressor.
2. Locate the "Viewer File Status" in the middle of the screen.
3. If the Viewer File was pre-installed by the Altronic Application Engineering Team, you will see the name of the file (**viewerfile.rvf** in the example in *Figure 4*) or **Viewer File Loaded**.

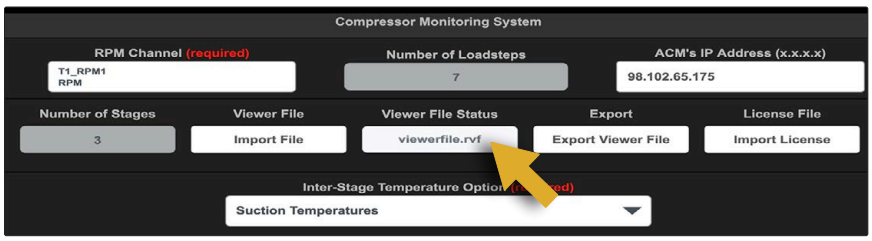

Figure 4

4. If the Viewer File was not pre-installed, you will see **Viewer File Not Loaded** (see *Figure 5*):
   a. Locate the Viewer File you received from the Applications team (typically sent by email).

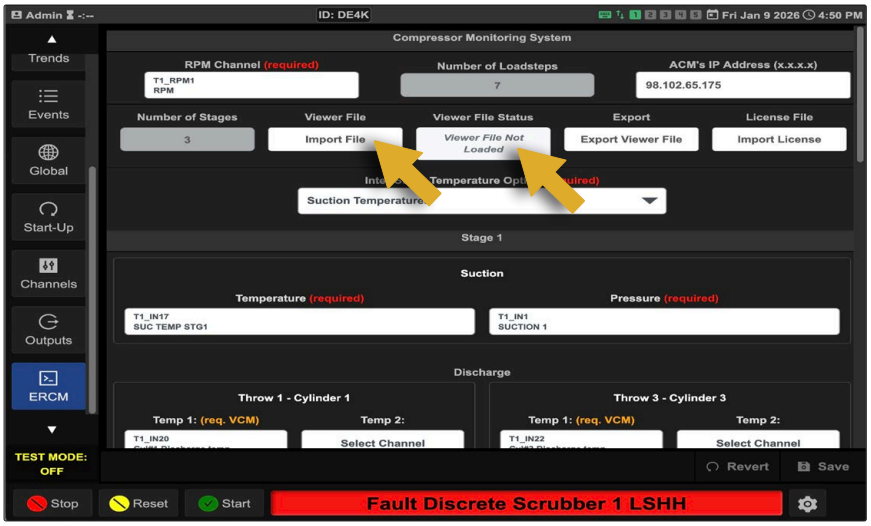

Figure 5

   b. Select the **Import File button**, then select the RVF file saved on your computer.
   c. Once uploaded, a confirmation message will appear on the screen.

3.3 Map the Sensors to the eRCM Inputs

3.3.1 eRCM Setup Screen Overview

When a Viewer File is loaded, the layout of the eRCM Setup screen will adjust automatically to match it. The Setup screen is divided first by compressor stages, then further divided by compressor throw. The examples in *Figure 6* (Stage 1), *Figure 7* (Stage 2), and *Figure 8* (Stage 3) show the eRCM Setup screen for a 3-stage, 4-throw compressor setup.

NOTES:

- The eRCM Setup screen layout is driven by the Viewer File, which is, in turn, driven by the Compressor Run File. For this reason, it is critical that the Compressor Run file accurately reflects the actual system. Any discrepancies between the Compressor Run File and the actual system may prevent eRCM Express from functioning as intended.
- Some fields on the eRCM Setup screen are read-only, as these fields are pulled directly from the Viewer File and will auto-populate when the file is imported.

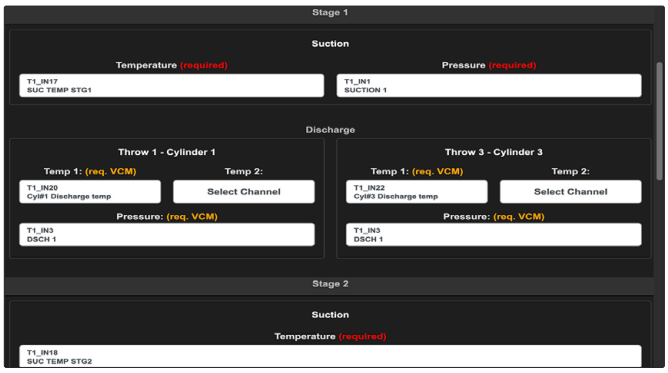

Figure 6

Figure 7

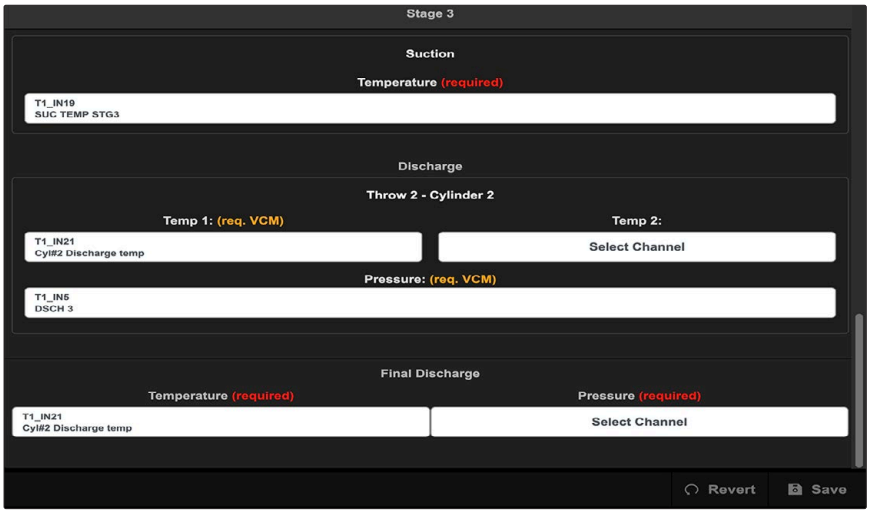

Figure 8

3.3.2 Assign the Channel Inputs

To map the correct sensors from the DE-4000 to each eRCM Express input channel:

1. Select each **channel input** to open the channel assignment screen, browse through the overall system channels, and select the appropriate channel. **NOTE:** This process uses the same channel selection interface as adding/modifying a DE-4000 dashboard element. Refer to the DE-4000 Operation Manual, DE-4000 OM, for detailed instructions on channel selection.
   a. **Required Inputs for Proper Functionality (marked as "required"):** All of the following channel inputs **MUST** be assigned; otherwise, eRCM Express will not function properly and will display inaccurate data:
      i. RPM Channel
      ii. Stage 1 Suction Temperature
      iii. Stage 1 Suction Pressure
      iv. Final Discharge Temperature
      v. Final Discharge Pressure
      vi. At least one of the following channels must be assigned:
         1. Suction Temperatures – All Stages
         2. Ambient Temperature

      NOTE: Suction stage temperatures are required for accurate calculations. If unavailable, operators may substitute **Ambient Temperature +20 °F** or **+30 °F**, though this will reduce accuracy substantially. ACI Services and Altronic strongly recommend installing the appropriate sensors if the Valve Condition Monitoring feature is to be used. Please contact your local Altronic Sales Representative for a cost-effective sensor kit to retrofit your unit for Valve Condition Monitoring.
   b. **Required Inputs for Valve Condition Monitoring (marked as "req. VCM"):** The following channel inputs must be assigned when using the Valve Condition Monitoring feature:
      i. Discharge Pressure – All Stages
      ii. Discharge Temperature – All Cylinders

      NOTE: The eRCM Setup screen will populate each cylinder to allow up to two Discharge Temperatures. The calculation is set up to average the Discharge Temperatures by the number of sensors that have been assigned in that cylinder. For example, assigning Temperature 1 will use the reading of that sensor. Assigning Temperature 1 and 2 will take the average reading from those two sensors.
   c. **Optional Inputs:** After all of the required channels have been assigned, additional optional fields may remain. If these fields are not applicable to your compressor, they may be left blank.
2. Select the **Save button**. The screen will display the message "Saving..." while the settings are saved.
3. If the message "Save Failed" displays, check all required settings to make sure they are configured and save again.

4.0 Step 3: Configure the eRCM dashboard

4.1 eRCM Dashboard Overview

After assigning all required channel inputs, the operator can begin configuring the parameters and functionality of the eRCM dashboard, which is the primary monitoring screen for the compressor and the eRCM Express.

To open the eRCM dashboard:

1. Select the **Dashboard button** in the navigation sidebar of the DE-4000.
2. Use the **Dashboard Selection** ← → **buttons** to select the eRCM dashboard; it will be added at the end of your previous DE-4000 dashboards. For example, if you previously had 4 dashboards, the eRCM dashboard will be number 5 of 5 (5/5). **NOTE:** To rearrange the order in which the dashboards appear, go to **Global** › **Params**, and edit the **iframe_page**.
3. The eRCM dashboard will look similar to the example shown in *Figure 9*. The dashboard may change slightly based on which eRCM features are turned on and off, as well as the physical characteristics of the compressor.
4. Select the **eRCM Menu** ☰ **button** in the top-left corner to navigate to the Settings, Features, and Actual v Calculated screens, or return to the Dashboard.

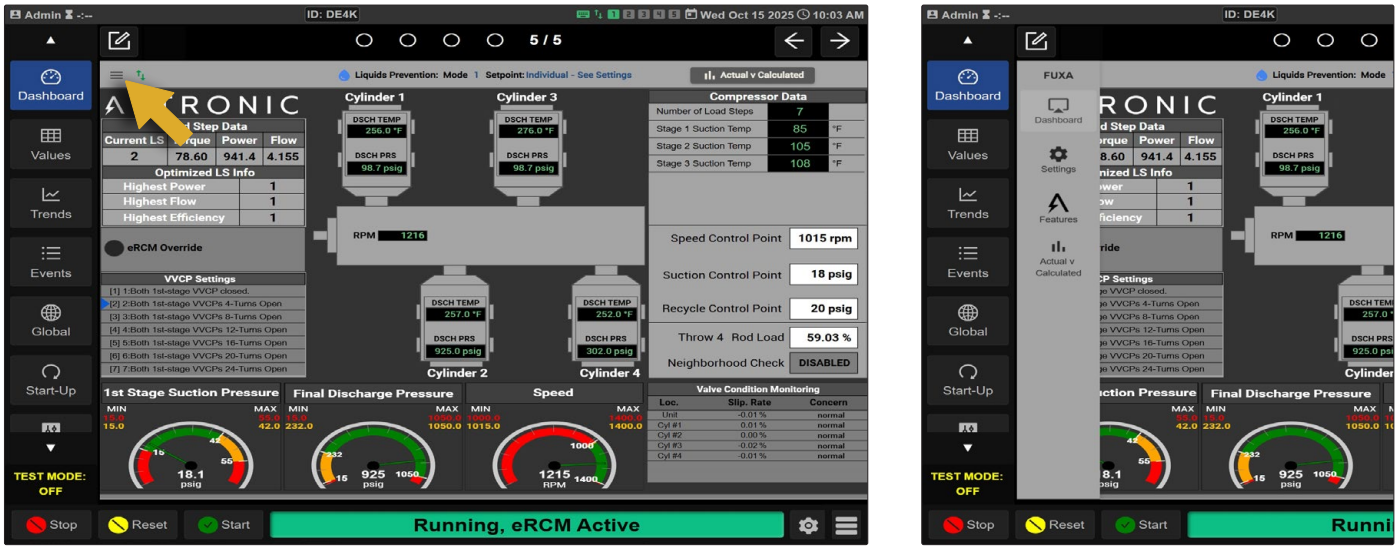

Figure 9

4.1.1 Communication Status

The communication status between the DE/ACM-4000 system and the ACI Server (eRCM Express) is indicated by two vertical arrows in the top-left corner of the eRCM dashboard. See *Figure 9* and *Figure 10*. The color of the status arrows indicates the current connection status:

- **Green:** Communication between DE/ACM-4000 and ACI Server is good. The ACI Server status is online, and the Heartbeat of the ACI Server is healthy.
- **Yellow:** The ACI Server is online, but the Heartbeat has been lost (the heartbeat icon will flash red and purple). The eRCM Express system cannot function.
- **Red:** The ACI Server is offline. The eRCM Express system cannot function.

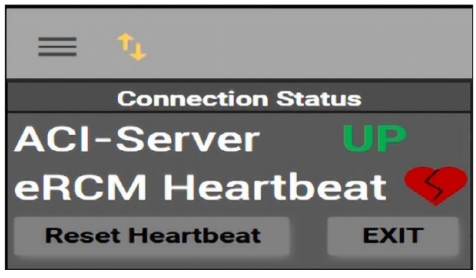

Figure 10

To reset the server Heartbeat:

1. Select the yellow communication status ⇅ arrows to open the Connection Status pop-up. See *Figure 10*.
2. Select the **Reset Heartbeat button** to force a reset of the Heartbeat.
3. If the Heartbeat fails to reset, power cycle the system.

4.1.2 eRCM Status Banners

- **eRCM Active Countdown Status Banner (Cyan):** When the system is started and gets to State 8 – Running, it will go into **Running, eRCM Active Countdown status mode**. This state will allow the compressor to run but will hold off non-critical eRCM faults until after the timer expires. This allows the compressor to get to a steady running state before activating most features. This timer is set to 5 minutes by default, but is adjustable by the Operator in the eRCM Settings screen. During this state, the status banner is cyan, and the active countdown timer will be displayed. See *Figure 11*.

Figure 11

- **eRCM Active Status Banner (Pale Green):** When the system is running and eRCM is enabled and actively monitoring or controlling, the pale green **Running, eRCM Active status banner** will display. When eRCM is disabled, the standard green DE/ACM-4000 Running status banner will display. See *Figure 12*.

Figure 12

- **eRCM Override Status Banner (Dark Blue):** When the system enters a Shutdown Avoidance state and eRCM is overriding control, the dark blue **eRCM XXXXX Override status banner** will display (XXXXX indicates which override the system is in: speed RPM, suction, or recycle). See *Figure 13*.

Figure 13

4.2 Enabling/Disabling eRCM Features

To enable the desired eRCM monitoring and/or control features:

1. Select the **eRCM Menu** ☰ **button** in the top-left corner of the eRCM dashboard, and choose **Features**.
2. Set the **eRCM toggle** at the top of the screen to **Enabled**. See *Figure 14*. **NOTE:** When the eRCM toggle is set to **Disabled**, all eRCM Express features are inactive and the control panel will perform as a standard DE/ACM-4000 control panel.

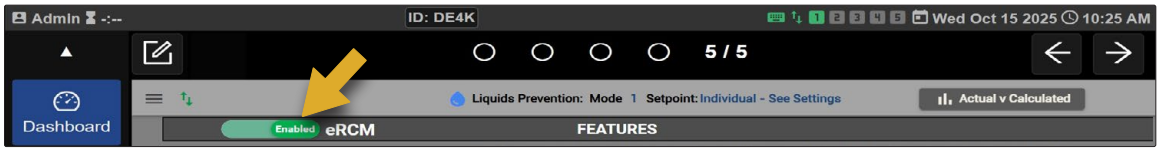

Figure 14

3. Select the individual toggles to enable or disable each feature of eRCM Express. See *Figure 15*.
   a. See the following sections for details about each eRCM feature:
      i. Valve Condition Monitoring
      ii. Liquids Prevention
      iii. Safe Neighborhood Check
      iv. Shutdown Avoidance
      v. Advanced Safety Monitoring
      vi. Min/Max Operating Setting
      vii. Actual vs Calculated.

Figure 15

4. Select the **Exit button** in the bottom-right corner to return to the eRCM dashboard.

4.2.1 Valve Condition Monitoring

When Valve Condition Monitoring is enabled (*Figure 16*), discharge conditions and how they affect unit flow and individual cylinders are continuously monitored to allow for preventative maintenance of system valves. The system will identify individual cylinders that need to be reviewed, as well as when/if the system needs to be taken offline for repair/replacement of valves and rings. Detecting failed valves early is critical, as valve failure can result in immediate rod load or pin non-reversal.

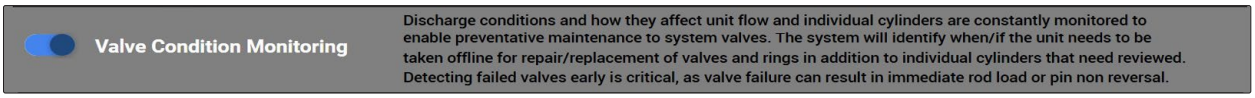

Figure 16

When this feature is turned on, a Valve Condition Monitoring window appears in the bottom-right corner of the eRCM dashboard. See *Figure 17*. The monitoring window displays the slippage rate calculations from eRCM Express. Slippage rates are shown as a percentage and a concern level for each cylinder in the system. The total calculated unit slip rate for the system is also displayed. See examples of normal concern (*Figure 17*) and moderate concern (*Figure 18*).

The concern levels and their associated slip rate percentages display as follows (the concern level text and outline of the Valve Condition Monitoring window change color accordingly):

- **Normal (Black):** <2%
- **Slight (Black):** 2<4%
- **Moderate (Yellow):** 4<6%
- **High (Red):** 6<8%
- **Very High (Red):** 8<10%
- **Out of Range (Red):** >10%

Valve Condition Monitoring		
Loc.	**Slip. Rate**	**Concern**
Unit	0.00 %	normal
Cyl #1	0.02 %	normal
Cyl #2	0.00 %	normal
Cyl #3	-0.02 %	normal
Cyl #4	-0.01 %	normal

Figure 17

Valve Condition Monitoring		
Loc.	**Slip. Rate**	**Concern**
Unit	1.09 %	normal
Cyl #1	-0.04 %	normal
Cyl #2	0.00 %	normal
Cyl #3	-0.04 %	normal
Cyl #4	4.05 %	moderate

Figure 18

NOTE: Altronic and ACI Services highly recommend trending slip-rate data and reviewing it regularly to assist with preventative maintenance and avoid immediate failures.

4.2.2 Liquids Prevention

The Liquids Prevention feature sets minimum temperature limits for stage 1 suction gas, inter-cooler gas, and after-cooler gas to prevent liquid formation within the compressor system.

To enable and configure Liquids Prevention:

1. Select the **Liquids Prevention toggle** to enable the feature. See *Figure 19*.

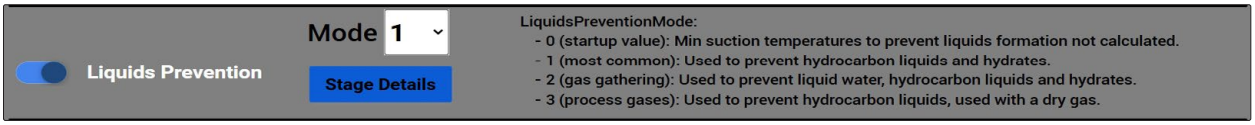

Figure 19

2. Select the Liquids Prevention Mode from the **Mode dropdown list**: 0, 1, 2, or 3. Mode 0 is selected by default. The selected Liquids Prevention mode determines how the temperature thresholds are calculated based on the type of operation and conditions the operator wants to protect against. The four modes are:
   a. **0** Disabled
   b. **1** Most Common Prevents hydrocarbon liquids and hydrates.
   c. **2** Gas Gathering Prevents liquid water, hydrocarbon liquids, and hydrates.
   d. **3** Process Gases Prevents hydrocarbon liquids (used with dry gas).
3. Select the **Stage Details button** to open the Settings screen. See *Figure 20*.
4. In the Louver Setpoint Selection area in the lower-left corner of the screen, select the **Single/Individual toggle** to choose between **Single (lowest temp setpoint)** and **Individual (loop per stage)**. See *Figure 20*. Single is selected by default.

Figure 20

   a. The toggle is purple when **Single** is selected. See *Figure 21*. To configure the settings for a single temperature setpoint:
      i. Select **None**, **PID**, or **Linear** from the **PID/Linear dropdown list**.
      ii. Enter the loop number used in the DE-4000 for louver control. **NOTE:** Go to **Global > Loops** for louver control settings.

b. The toggle is blue when **Individual** is selected. See *Figure 22*. To configure multiple temperature setpoints:
   i. Select **None**, **PID**, or **Linear** from the **PID/Linear dropdown list**.
   ii. Enter the loop number for each output.

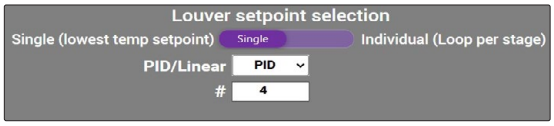

Figure 21

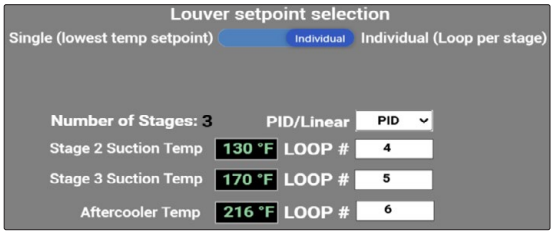

Figure 22

4.2.2.1 Liquids Prevention Status Bar Overview

The active Liquids Prevention mode (0, 1, 2, or 3) and setpoint status are displayed in the status bar at the top of the eRCM dashboard:

- The Liquids Prevention indicator LED is gray when the feature is disabled. See *Figure 23*.
- The Liquids Prevention indicator LED is blue when the feature is enabled:
  - When **Individual** is selected, "Individual - See Settings" is shown. See *Figure 24*.
  - When **Single** is selected, the current stage setpoint temperature is shown. See *Figure 25*.
  - When the Liquids Prevention feature is overriding the standard louver control, the current override setpoint for the louvers will be displayed.

Figure 23

Figure 24

Figure 25

4.2.3 Safe Neighborhood Check

The Safe Neighborhood Check feature (*Figure 26*) identifies safety issues near the current operating setpoints as suction and discharge pressures are expanded. This feature alerts the operator to the risk of a shutdown in the near future: low risk (safe), moderate risk, or high risk.

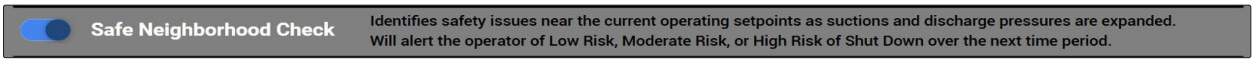

Figure 26

When enabled, the shutdown risk level is displayed on the right side of the eRCM dashboard, just above the Valve Condition Monitoring section: **Safe** (green), **Moderate** (yellow), or **High** (red). See *Figure 27*. **Disabled** (Gray) is shown when the Safe Neighborhood Check feature is turned off. See *Figure 28*. **Waiting** (Gray) is shown when the system is waiting for RPM.

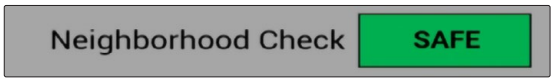

Figure 27

Figure 28

4.2.4 Shutdown Avoidance

When the Shutdown Avoidance feature is enabled, the eRCM Express evaluates changes in suction pressure, speed, and/or recycle pressure—based on the operator-selected options—to help prevent an unwanted shutdown. After the operator selects which parameters the feature may control, the system returns operating setpoints for those options. Shutdown Avoidance must be configured for each parameter the operator wants eRCM Express to monitor and automatically adjust. The operator may allow eRCM Express to control suction pressure, speed, and/or recycle pressure.

To enable and configure the Shutdown Avoidance feature:

1. Select the **Shutdown Avoidance toggle** to enable it.
2. Select the **dropdown list** to choose the desired setting: Disabled, Speed, Suction, Speed/Suction, Recycle, Speed/Recycle, Suction/Recycle, Speed/Suction/Recycle. See *Figure 29*. Disabled is selected by default.

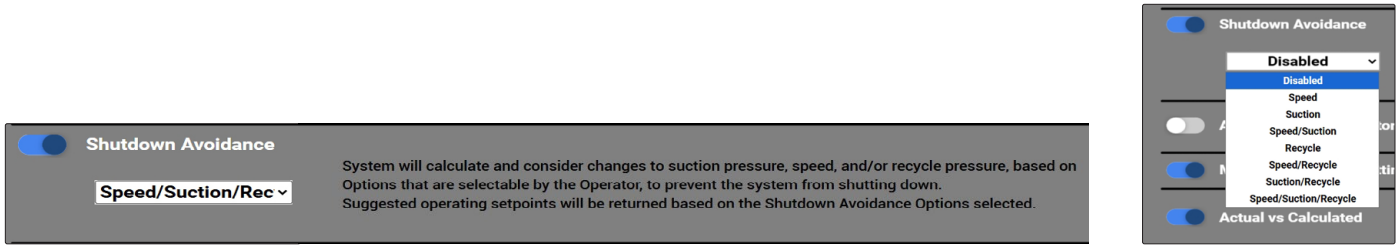

Figure 29

The real-time Shutdown Avoidance setpoints are displayed on the right side of the eRCM dashboard, and only the options enabled on the Features screen are shown. See *Figure 30*. For example, if the Speed/Suction option is selected, only the Speed Control Point and Suction Control Point will be displayed. When the system enters a Shutdown Avoidance state and eRCM Express overrides a control setpoint, that setpoint field changes from white to blue. The DE-4000 status banner at the bottom of the screen also indicates the active override status. See *Figure 31*.

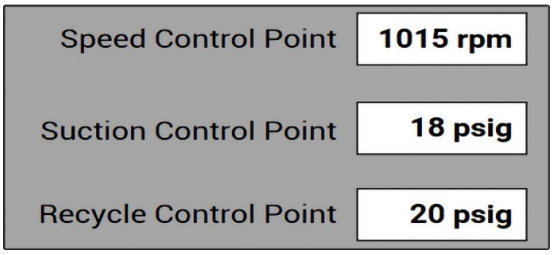

Figure 30

Figure 31

4.2.5 Advanced Safety Monitoring

When the Advanced Safety Monitoring feature is enabled (*Figure 32*), eRCM Express continuously checks for several critical conditions and will immediately shut down the system if any are detected. These conditions include rod load, pin load, pin non-reversal, gas thermodynamic issues, invalid inputs, and high discharge pressures.

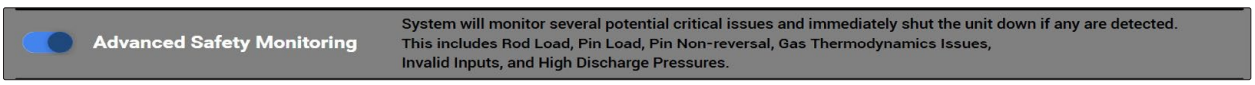

Figure 32

Any resulting fault is reported in the DE-4000 status banner at the bottom of the screen. However, because these conditions trigger an immediate shutdown, only limited monitoring information is shown on the eRCM dashboard. The one item that is displayed on the dashboard is the system's worst-case rod load percentage, located on the right side of the screen just above the Safe Neighborhood indicator. See *Figure 33*. The Rod Load box turns yellow when the percentage approaches unsafe conditions, typically 90%; it turns red when the value exceeds spec, and leads to a shut down if Shutdown Avoidance can not deter one.

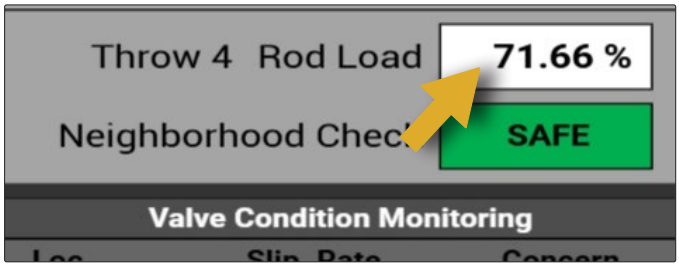

Figure 33

4.2.6 Min/Max Operating Setting

When the Min/Max Operating Setting feature is enabled (*Figure 34*), eRCM Express provides the minimum and maximum operating setpoints for suction pressure, discharge pressure, and speed for the current load step to help prevent the system from running in an unsafe condition.

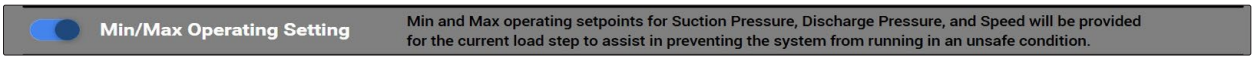

Figure 34

Three dynamic gauges at the bottom of the eRCM dashboard display real-time feedback for these min/max limits. See *Figure 35*. The defined min/max appear above each gauge: fault limits are shown in red and alarm limits are yellow. The gauges update automatically with the new fault and alarm ranges. Any alarms or faults triggered by this feature will appear in the DE-4000 status banner.

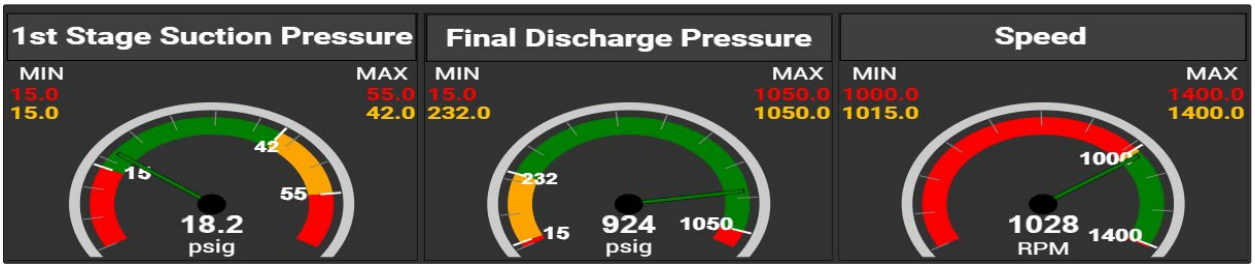

Figure 35

4.2.7 Actual vs Calculated Monitoring

When the Actual vs Calculated Monitoring feature is enabled (*Figure 36*), eRCM Express will continuously compare the actual values for discharge pressure, discharge temperature, unit power, and unit flow to their calculated (modeled) values. If the difference between actual and calculated values is outside of acceptable ranges, the operator will need to review other data to determine the root cause and then proceed with system modifications.

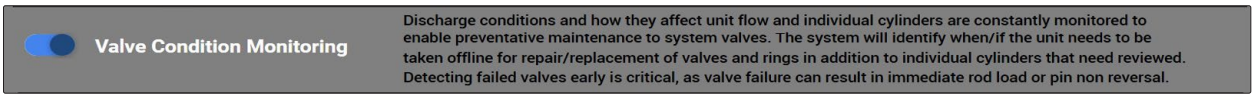

Figure 36

Actual vs. Calculated Monitoring allows the operator to set a differential delta percentage for an alarm or a fault for each of the metrics being monitored. These can be configured individually in the Actual vs. Calculated section of the eRCM Features screen.

To enable and configure the Actual vs. Calculated feature:

1. Select the **Actual vs Calculated toggle** to enable it. See *Figure 37*.
2. Enter the desired **Alarm Differential %** and **Fault Differential %** for discharge pressure and discharge temperature, from 1% to 50%.
3. Enter the amount of time, in seconds, that must elapse before the alarm/fault will occur in the **Debounce Timer field**.

NOTE: ACI and Altronic recommend setting a 10% alarm differential and a 20% fault (shutdown) differential.

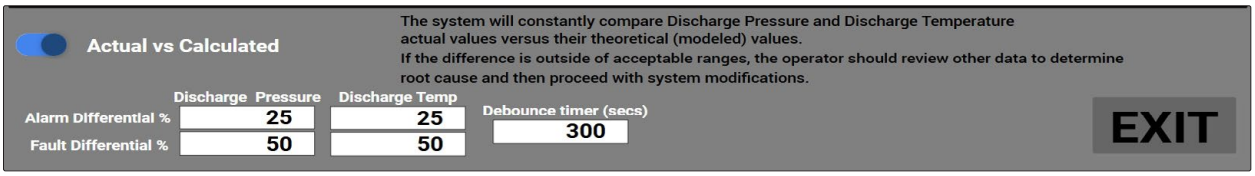

Figure 37

To review the actual vs calculated values:

1. Select the **Actual v Calculated button** at the top of the eRCM dashboard.
2. The Actual vs Calculated screen (*Figure 38*) shows:
   a. The actual values and calculated values for all of the cylinders, flow, and power.
   b. The current alarm and fault delta setpoints assigned on the eRCM Features screen.
   c. The current delta percentage so that the operator can compare everything in one place.

NOTE: Page 1 of this screen shows up to six cylinders. If more than six cylinders are present, a second page will be added for the remaining cylinders; use the **Previous** and **Next buttons** to toggle between the pages.

3. Select the **Exit button** in the bottom-right corner to return to the eRCM dashboard.

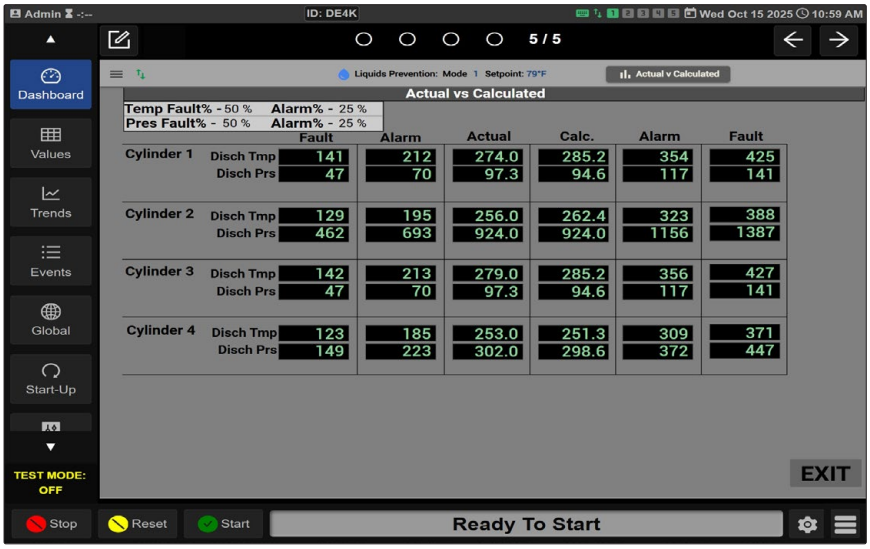

Figure 38

4.3 Adding the Cylinder Display

A cylinder display may be added to the center of the eRCM dashboard and populated with real-time data from the cylinders.

First, select the cylinder layout:

1. Select the **eRCM Menu button** in the top-left corner, and choose **Settings**.
2. On the Settings screen, select the dropdown list in the bottom-right corner and choose the cylinder layout to be displayed on the eRCM dashboard, 4throw, 2throw, 2throw tandem left, or 2throw tandem right. The name of the selected layout is shown below the dropdown list. See *Figure 39*.
3. Select the **Exit button** to return to the eRCM dashboard.

NOTE: Contact Altronic Support for assistance in creating an accurate cylinder layout for your data, if needed.

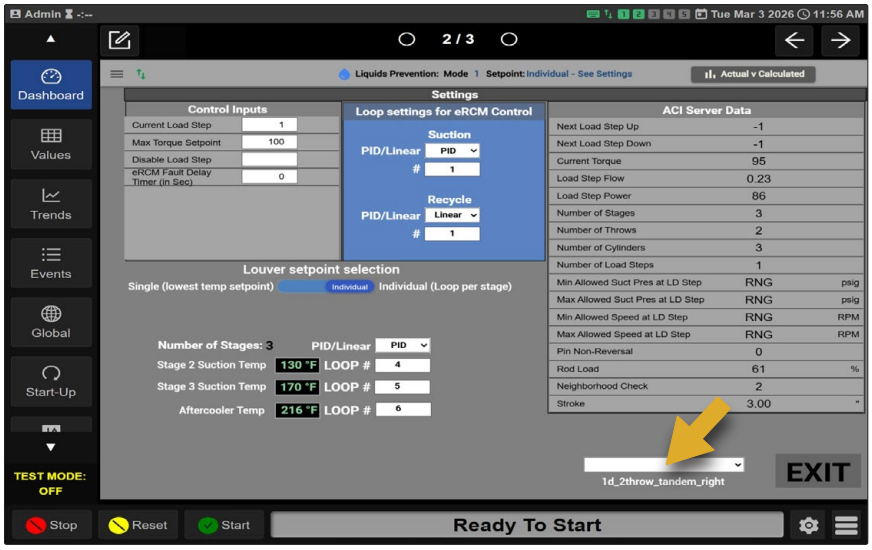

Figure 39

Next, populate each cylinder shown in the cylinder display with the correct data:

1. On the eRCM dashboard, select the **cylinder name** above or below the image of the selected cylinder.
2. Select the correct cylinder name from the list in the pop-up window. See *Figure 40*. The available names are imported from the eRCM Viewer File.

Figure 40

3. Once a cylinder is assigned, the system will automatically populate its temperature and pressure readings on the display.
4. Select a cylinder image to open the Advanced Monitoring pop-up window to view additional details, including stage and throw data. See *Figure 41*.

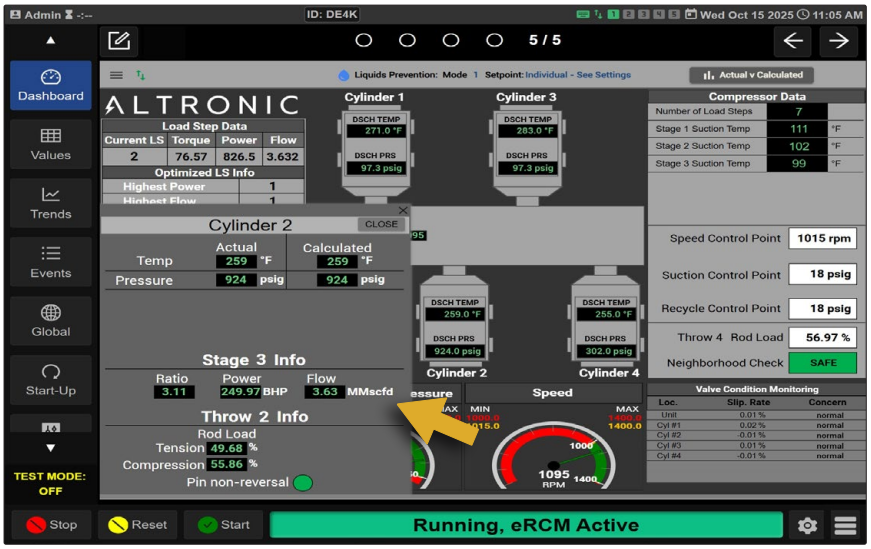

Figure 41

5.0 Step 4: Configure the Settings Screen

The Settings screen displays real-time outputs identified by eRCM Express as critical data points from the ACI server. Although these values are also available on the main eRCM dashboard, the Settings screen consolidates them into a single, easy-to-read table. See *Figure 42*.

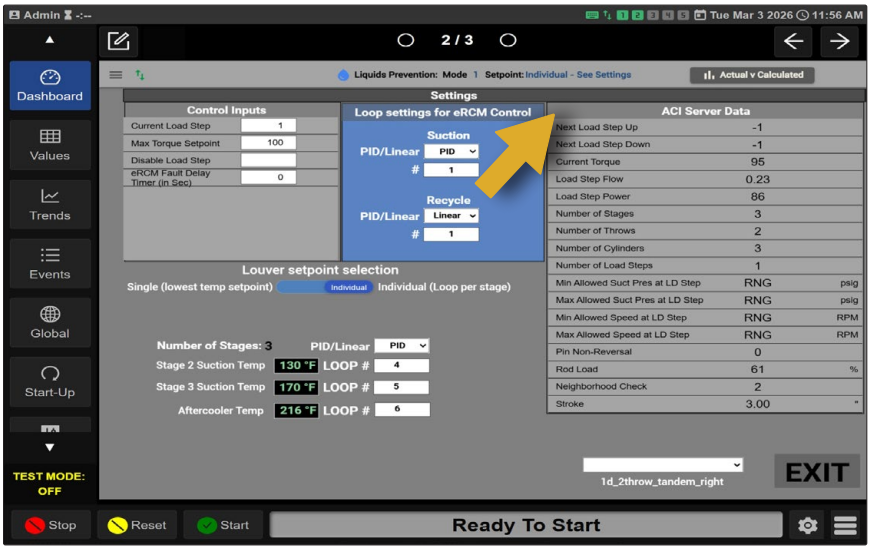

Figure 42

To open the Settings screen and configure the required parameters:

1. Select the **eRCM Features Menu** button in the top-left corner of the eRCM dashboard, and choose **Settings**.
2. In the Control Inputs section (see *Figure 43*):
   a. Enter the **Current Load Step** that the compressor is physically configured for.
   b. Enter the **Max Torque Setpoint**. This setpoint affects calculations for the Shutdown Avoidance feature that run behind the scenes.
   c. Enter the **Disable Load Step**.

d. Enter the number of seconds for the **eRCM Fault Delay Timer**.

NOTE: When the compressor is running, the ACI Inputs section is disabled.

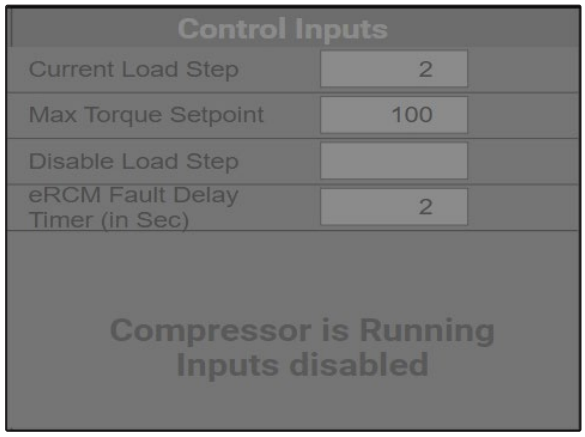

Figure 43

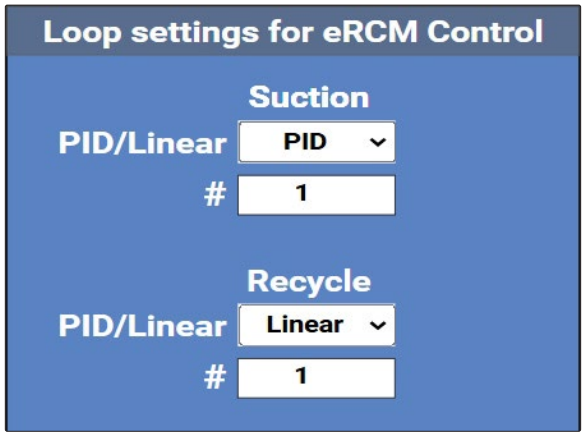

Figure 44

3. In the Loop Settings for eRCM Control section (see *Figure 44*), configure the settings for suction and recycle:
   a. Choose **None**, **PID**, or **Linear** from the **PID/Linear dropdown list**.
      i. Enter the loop number used in the DE-4000 for louver control. **NOTE:** Go to **Global** > **Loops** for louver control settings.
4. Select the **dropdown list** in the bottom-right corner of the screen to choose your compressor setup to populate the compressor display on the eRCM dashboard, if you have not already populated the cylinder layout. See *Figure 45*.

Figure 45

5. In the Louver Setpoint Selection section, assign the temperature setpoint for the Liquids Prevention feature. See *Figure 46*. Refer to section **4.2.2 Liquids Prevention on page 9** for detailed instructions.

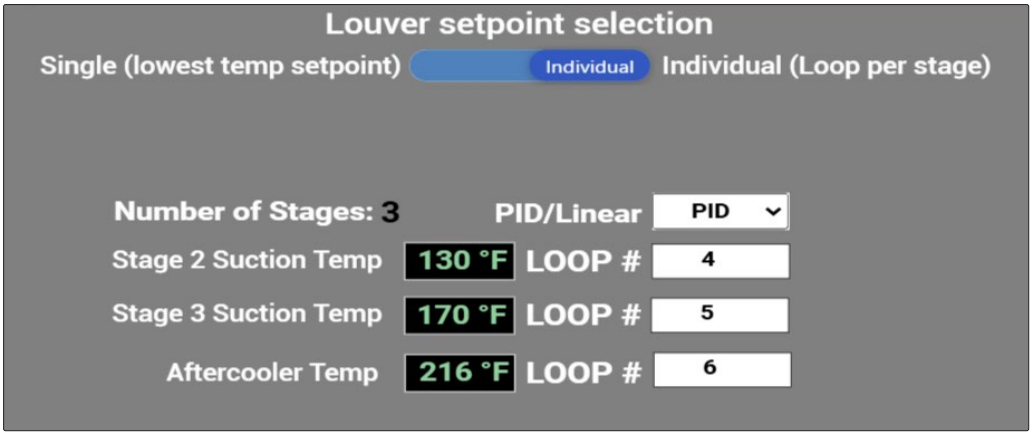

Figure 46

6.0 Step 5: AWI Set Up (Optional – For ACM-4000 Enabled Systems)

To view raw data from the eRCM or set up additional AWI screens, the eRCM Express AWI will need to be loaded into the MDI:

1. Download the eRCM Express AWI, named **EngMon**, from the Altronic AWI Device Profile Repository.
2. On your computer, open a web browser and enter the ACM-4000 IP address in the address bar: **98.102.65.175:3000/awi**
   NOTE: We recommend using Chrome or Firefox for best results.
3. Select the **MDI Configuration Menu button** in the bottom-right corner of the DE-4000 dashboard to open the MDI configuration interface.
4. Select the **Add New Device button**, and choose the EngMon AWI file to be added. See *Figure 47*.
5. Select the EngMon device summary card to edit the settings:
   a. Set the **IP Address** to the IP address used by the ACM-4000.
   b. Set the **Port** to 8088.

NOTE: *Figure 48* shows the eRCM Express AWI device settings when the ACM-4000's GBIT IP Address is 98.102.65.175.

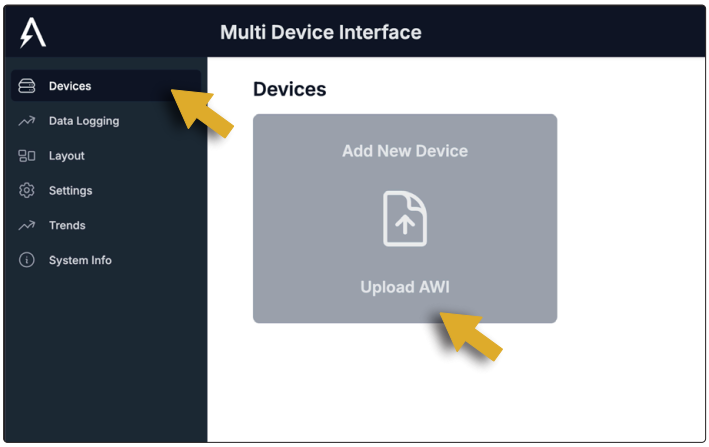

Figure 47

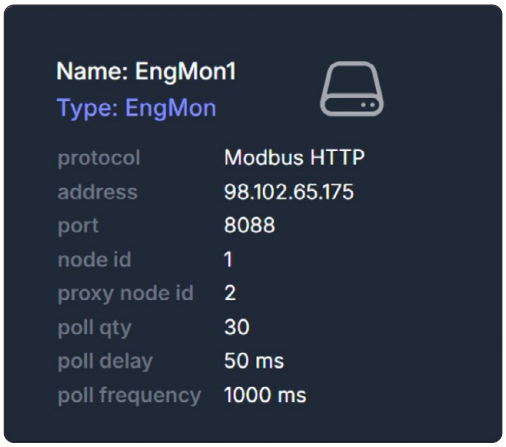

Figure 48

7.0 eRCM Data Logging

7.1 Set Up the AWI Sidebar Layout and Buttons

1. Select the **Data Logging button** in the navigation sidebar, then turn on data logging for the eRCM device.
2. Select the **Trends button** to open the Trends screen.

3. Configure the Data Explorer to include eRCM data. See example eRCM chart in *Figure 49*.

Figure 49

8.0 Modbus Communications

Although the eRCM Express is built into a user-friendly dashboard that highlights key features, all underlying data generated by the ACI Server, which performs the calculations, remains fully accessible. This data can be read through the ACI Modbus TCP/IP Slave Server running on the ACM-4000.

To access the eRCM Express data, go to the ACM-4000 IP address and connect over TCP Port 503 on any Node Address. From there, all eRCM Express registers can be polled and returned to a SCADA system.

NOTE: Several registers (130, 145, 147, 149, 151, and 181) include detailed descriptions at the end of this document. Click a register number in the table on the following pages to jump to its detailed explanation.

Register	Label	Key	ReadOnly / ReadWrite	Type
1	Current Load Step	CurrLS	ReadWrite	UINT32
3	Stage 1 Suction Pressure	Ps1G	ReadWrite	FLOAT32
5	Discharge Pressure	PdG	ReadWrite	FLOAT32
7	Discharge Pressure After Bypass	PdG_Bypass	ReadWrite	FLOAT32
9	Current Speed RPM	CurrSpeed	ReadWrite	FLOAT32
11	Stage 1 Suction Temp F	Ts1F	ReadWrite	FLOAT32
13	Stage 2 Suction Temp F	Ts2F	ReadWrite	FLOAT32
15	Stage 3 Suction Temp F	Ts3F	ReadWrite	FLOAT32
17	Stage 4 Suction Temp F	Ts4F	ReadWrite	FLOAT32
19	Stage 5 Suction Temp F	Ts5F	ReadWrite	FLOAT32
21	Stage 6 Suction Temp F	Ts6F	ReadWrite	FLOAT32
23	Max Torque Setpoint	TorqSP	ReadWrite	FLOAT32
101	Next Load Step Up	NextLoadStepUp	ReadOnly	FLOAT32
103	Next Load Step Down	NextLoadStepDown	ReadOnly	FLOAT32
105	Current Torque	CurrentTorque	ReadOnly	FLOAT32
107	Load Step Flow	FlowArray	ReadOnly	FLOAT32

109	Load Step Power	LoadArray	ReadOnly	FLOAT32
111	Number of Stages	NumberOfStages	ReadOnly	INT32
113	Number of Throws	NumberOfThrows	ReadOnly	INT32
115	Number of Cylinders	NumberOfCylinders	ReadOnly	INT32
117	Number of Load Steps	NumberOfLoadSteps	ReadOnly	INT32
119	Min allowed SuctPres at LD Step	MinSuctPrsAtLS	ReadOnly	FLOAT32
121	Max allowed SuctPres at LD Step	MaxSuctPrsAtLS	ReadOnly	FLOAT32
123	Min allowed Speed at LD Step	MinSpeedAtLS	ReadOnly	FLOAT32
125	Max allowed Speed at LD Step	MaxSpeedAtLS	ReadOnly	FLOAT32
127	Rod Load Percentage	RodLoadPct	ReadOnly	FLOAT32
129	Pin Non Reversal	PinNonRev	ReadOnly	UINT16
130	Neighborhood Check	NHC	ReadOnly	FLOAT32
132	Stroke	Stroke	ReadOnly	FLOAT32
134	Heartbeat	Heartbeat	ReadOnly	UINT16
135	Optimal Loadstep with Highest Power	OptimalLoadStepPower	ReadOnly	INT32
137	Optimal Loadstep with Highest Flow	OptimalLoadStepFlow	ReadOnly	INT32
139	Optimal Loadstep with Highest Efficiency	OptimalLoadStepEfficiency	ReadOnly	INT32
141	Max allowed Horsepower	MaxAllowedLoad	ReadOnly	UINT32
143	Potential Utilization Percent	PotentialUtilizationPercent	ReadOnly	UINT32
145	Shut Down Action Suggestion	ShutDownActionSuggestion	ReadOnly	UINT32
147	Shut Down Action Value	ShutDownActionValue	ReadOnly	UINT32
149	Error Array	ErrorArray	ReadOnly	UINT32
151	ShutDown Avoidance Options	ShutDownAvoidanceOptions	ReadWrite	INT32
153	Viewer File Loaded	ViewerFileLoaded	ReadOnly	BOOL
155	Safe Load Step Startup	SafeLoadStepStartup	ReadOnly	INT32
157	Discharge Conditions Effect On Cylinder1	DischargeConditionsEffectOnCylinder1	ReadOnly	FLOAT32
159	Discharge Conditions EffectOn Cylinder Temperature	DischargeConditionsEffectOnCylinderTemp	ReadOnly	FLOAT32
161	Discharge Conditions Effect On UnitFlow	DischargeConditionsEffectOnUnitFlow	ReadOnly	FLOAT32
163	Min allowed DischPres at LD Step	MinDischPrsAtLS	ReadOnly	FLOAT32
165	Max allowed DischPres at LD Step	MaxDischPrsAtLS	ReadOnly	FLOAT32
167	Disable Load Step	DisableLS	ReadWrite	UINT32
169	ACMinTsLiquids_degF	ACMinTsLiquids_degF	ReadOnly	UINT32
171	Stg_1_MinTsLiquids_degF	Stg_1_MinTsLiquids_degF	ReadOnly	UINT32
173	Stg_2_MinTsLiquids_degF	Stg_2_MinTsLiquids_degF	ReadOnly	UINT32
175	Stg_3_MinTsLiquids_degF	Stg_3_MinTsLiquids_degF	ReadOnly	UINT32
177	Stg_4_MinTsLiquids_degF	Stg_4_MinTsLiquids_degF	ReadOnly	UINT32
179	Stg_5_MinTsLiquids_degF	Stg_5_MinTsLiquids_degF	ReadOnly	UINT32
181	Liquids Prevention Mode	LiquidsPreventionMode	ReadWrite	UINT32
183	Ambient Temperature	AmbtTemp	ReadOnly	UINT32
185	Atmospheric Pressure	AtmPress	ReadOnly	FLOAT32
187	Auxiliary Load	AuxLoad	ReadOnly	UINT32

189	Unit Flow	UnitFlow	ReadOnly	FLOAT32
191	Unit Power	UnitPower	ReadOnly	FLOAT32
193	Unit Critical Issue	UnitCriticalIssue	ReadOnly	BOOL
195	Ercm Loadstep0	ErcmLoadstep0	ReadOnly	UINT32
197	Ercm Loadstep1	ErcmLoadstep1	ReadOnly	UINT32
199	Ercm Loadstep2	ErcmLoadstep2	ReadOnly	UINT32
201	Ercm Loadstep3	ErcmLoadstep3	ReadOnly	UINT32
203	Ercm Loadstep4	ErcmLoadstep4	ReadOnly	UINT32
205	Ercm Loadstep5	ErcmLoadstep5	ReadOnly	UINT32
207	Ercm Loadstep6	ErcmLoadstep6	ReadOnly	UINT32
209	Ercm Loadstep7	ErcmLoadstep7	ReadOnly	UINT32
211	Ercm Loadstep8	ErcmLoadstep8	ReadOnly	UINT32
213	Ercm Loadstep9	ErcmLoadstep9	ReadOnly	UINT32
215	Ercm Loadstep10	ErcmLoadstep10	ReadOnly	UINT32
217	Ercm Loadstep11	ErcmLoadstep11	ReadOnly	UINT32
219	Ercm Loadstep12	ErcmLoadstep12	ReadOnly	UINT32
221	Ercm Loadstep13	ErcmLoadstep13	ReadOnly	UINT32
223	Ercm Loadstep14	ErcmLoadstep14	ReadOnly	UINT32
225	Ercm Loadstep15	ErcmLoadstep15	ReadOnly	UINT32
227	Ercm Loadstep16	ErcmLoadstep16	ReadOnly	UINT32
229	Ercm Loadstep17	ErcmLoadstep17	ReadOnly	UINT32
231	Ercm Loadstep18	ErcmLoadstep18	ReadOnly	UINT32
233	Ercm Loadstep19	ErcmLoadstep19	ReadOnly	UINT32
235	Ercm Loadstep20	ErcmLoadstep20	ReadOnly	UINT32
237	Ercm Loadstep21	ErcmLoadstep21	ReadOnly	UINT32
239	Ercm Loadstep22	ErcmLoadstep22	ReadOnly	UINT32
241	Ercm Loadstep23	ErcmLoadstep23	ReadOnly	UINT32
243	Ercm Loadstep24	ErcmLoadstep24	ReadOnly	UINT32
245	Ercm Loadstep25	ErcmLoadstep25	ReadOnly	UINT32
247	Ercm Loadstep26	ErcmLoadstep26	ReadOnly	UINT32
249	Ercm Loadstep27	ErcmLoadstep27	ReadOnly	UINT32
251	Ercm Loadstep28	ErcmLoadstep28	ReadOnly	UINT32
253	Ercm Loadstep29	ErcmLoadstep29	ReadOnly	UINT32
255	Ercm Loadstep30	ErcmLoadstep30	ReadOnly	UINT32
257	Ercm Loadstep31	ErcmLoadstep31	ReadOnly	UINT32
259	Ercm Loadstep32	ErcmLoadstep32	ReadOnly	UINT32
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263	Ercm Loadstep34	ErcmLoadstep34	ReadOnly	UINT32
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269	Ercm Loadstep37	ErcmLoadstep37	ReadOnly	UINT32

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275	Ercm Loadstep40	ErcmLoadstep40	ReadOnly	UINT32
277	Ercm Loadstep41	ErcmLoadstep41	ReadOnly	UINT32
279	Ercm Loadstep42	ErcmLoadstep42	ReadOnly	UINT32
281	Ercm Loadstep43	ErcmLoadstep43	ReadOnly	UINT32
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285	Ercm Loadstep45	ErcmLoadstep45	ReadOnly	UINT32
287	Ercm Loadstep46	ErcmLoadstep46	ReadOnly	UINT32
289	Ercm Loadstep47	ErcmLoadstep47	ReadOnly	UINT32
291	Ercm Loadstep48	ErcmLoadstep48	ReadOnly	UINT32
293	Ercm Loadstep49	ErcmLoadstep49	ReadOnly	UINT32
295	Ercm Loadstep50	ErcmLoadstep50	ReadOnly	UINT32
297	Ercm Loadstep51	ErcmLoadstep51	ReadOnly	UINT32
299	Ercm Loadstep52	ErcmLoadstep52	ReadOnly	UINT32
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303	Ercm Loadstep54	ErcmLoadstep54	ReadOnly	UINT32
305	Ercm Loadstep55	ErcmLoadstep55	ReadOnly	UINT32
307	Ercm Loadstep56	ErcmLoadstep56	ReadOnly	UINT32
309	Ercm Loadstep57	ErcmLoadstep57	ReadOnly	UINT32
311	Ercm Loadstep58	ErcmLoadstep58	ReadOnly	UINT32
313	Ercm Loadstep59	ErcmLoadstep59	ReadOnly	UINT32
315	Ercm Loadstep60	ErcmLoadstep60	ReadOnly	UINT32
317	Ercm Loadstep61	ErcmLoadstep61	ReadOnly	UINT32
319	Ercm Loadstep62	ErcmLoadstep62	ReadOnly	UINT32
321	Ercm Loadstep63	ErcmLoadstep63	ReadOnly	UINT32
323	Ercm Loadstep64	ErcmLoadstep64	ReadOnly	UINT32
325	Ercm Loadstep65	ErcmLoadstep65	ReadOnly	UINT32
327	Ercm Loadstep66	ErcmLoadstep66	ReadOnly	UINT32
329	Ercm Loadstep67	ErcmLoadstep67	ReadOnly	UINT32
331	Ercm Loadstep68	ErcmLoadstep68	ReadOnly	UINT32
333	Ercm Loadstep69	ErcmLoadstep69	ReadOnly	UINT32
335	Ercm Loadstep70	ErcmLoadstep70	ReadOnly	UINT32
337	Ercm Loadstep71	ErcmLoadstep71	ReadOnly	UINT32
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355	Ercm Loadstep80	ErcmLoadstep80	ReadOnly	UINT32
357	Ercm Loadstep81	ErcmLoadstep81	ReadOnly	UINT32
359	Ercm Loadstep82	ErcmLoadstep82	ReadOnly	UINT32
361	Ercm Loadstep83	ErcmLoadstep83	ReadOnly	UINT32
363	Ercm Loadstep84	ErcmLoadstep84	ReadOnly	UINT32
365	Ercm Loadstep85	ErcmLoadstep85	ReadOnly	UINT32
367	Ercm Loadstep86	ErcmLoadstep86	ReadOnly	UINT32
369	Ercm Loadstep87	ErcmLoadstep87	ReadOnly	UINT32
371	Ercm Loadstep88	ErcmLoadstep88	ReadOnly	UINT32
373	Ercm Loadstep89	ErcmLoadstep89	ReadOnly	UINT32
375	Ercm Loadstep90	ErcmLoadstep90	ReadOnly	UINT32
377	Ercm Loadstep91	ErcmLoadstep91	ReadOnly	UINT32
379	Ercm Loadstep92	ErcmLoadstep92	ReadOnly	UINT32
381	Ercm Loadstep93	ErcmLoadstep93	ReadOnly	UINT32
383	Ercm Loadstep94	ErcmLoadstep94	ReadOnly	UINT32
385	Ercm Loadstep95	ErcmLoadstep95	ReadOnly	UINT32
387	Ercm Loadstep96	ErcmLoadstep96	ReadOnly	UINT32
389	Ercm Loadstep97	ErcmLoadstep97	ReadOnly	UINT32
391	Ercm Loadstep98	ErcmLoadstep98	ReadOnly	UINT32
393	Ercm Loadstep99	ErcmLoadstep99	ReadOnly	UINT32
395	Ercm Loadstep100	ErcmLoadstep100	ReadOnly	UINT32
397	Ercm Loadstep101	ErcmLoadstep101	ReadOnly	UINT32
399	Ercm Loadstep102	ErcmLoadstep102	ReadOnly	UINT32
401	Ercm Loadstep103	ErcmLoadstep103	ReadOnly	UINT32
403	Ercm Loadstep104	ErcmLoadstep104	ReadOnly	UINT32
405	Ercm Loadstep105	ErcmLoadstep105	ReadOnly	UINT32
407	Ercm Loadstep106	ErcmLoadstep106	ReadOnly	UINT32
409	Ercm Loadstep107	ErcmLoadstep107	ReadOnly	UINT32
411	Ercm Loadstep108	ErcmLoadstep108	ReadOnly	UINT32
413	Ercm Loadstep109	ErcmLoadstep109	ReadOnly	UINT32
415	Ercm Loadstep110	ErcmLoadstep110	ReadOnly	UINT32
417	Ercm Loadstep111	ErcmLoadstep111	ReadOnly	UINT32
419	Ercm Loadstep112	ErcmLoadstep112	ReadOnly	UINT32
421	Ercm Loadstep113	ErcmLoadstep113	ReadOnly	UINT32
423	Ercm Loadstep114	ErcmLoadstep114	ReadOnly	UINT32
425	Ercm Loadstep115	ErcmLoadstep115	ReadOnly	UINT32
427	Ercm Loadstep116	ErcmLoadstep116	ReadOnly	UINT32
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431	Ercm Loadstep118	ErcmLoadstep118	ReadOnly	UINT32
433	Ercm Loadstep119	ErcmLoadstep119	ReadOnly	UINT32

435	Ercm Loadstep120	ErcmLoadstep120	ReadOnly	UINT32
437	Ercm Loadstep121	ErcmLoadstep121	ReadOnly	UINT32
439	Ercm Loadstep122	ErcmLoadstep122	ReadOnly	UINT32
441	Ercm Loadstep123	ErcmLoadstep123	ReadOnly	UINT32
443	Ercm Loadstep124	ErcmLoadstep124	ReadOnly	UINT32
445	Ercm Loadstep125	ErcmLoadstep125	ReadOnly	UINT32
447	Ercm Loadstep126	ErcmLoadstep126	ReadOnly	UINT32
449	Ercm Loadstep127	ErcmLoadstep127	ReadOnly	UINT32
451	Ercm Loadstep128	ErcmLoadstep128	ReadOnly	UINT32
453	Ercm Loadstep129	ErcmLoadstep129	ReadOnly	UINT32
455	Ercm Loadstep130	ErcmLoadstep130	ReadOnly	UINT32
457	Ercm Loadstep131	ErcmLoadstep131	ReadOnly	UINT32
459	Ercm Loadstep132	ErcmLoadstep132	ReadOnly	UINT32
461	Ercm Loadstep133	ErcmLoadstep133	ReadOnly	UINT32
463	Ercm Loadstep134	ErcmLoadstep134	ReadOnly	UINT32
465	Ercm Loadstep135	ErcmLoadstep135	ReadOnly	UINT32
467	Ercm Loadstep136	ErcmLoadstep136	ReadOnly	UINT32
469	Ercm Loadstep137	ErcmLoadstep137	ReadOnly	UINT32
471	Ercm Loadstep138	ErcmLoadstep138	ReadOnly	UINT32
473	Ercm Loadstep139	ErcmLoadstep139	ReadOnly	UINT32
475	Ercm Loadstep140	ErcmLoadstep140	ReadOnly	UINT32
477	Ercm Loadstep141	ErcmLoadstep141	ReadOnly	UINT32
479	Ercm Loadstep142	ErcmLoadstep142	ReadOnly	UINT32
481	Ercm Loadstep143	ErcmLoadstep143	ReadOnly	UINT32
483	Ercm Loadstep144	ErcmLoadstep144	ReadOnly	UINT32
485	Ercm Loadstep145	ErcmLoadstep145	ReadOnly	UINT32
487	Ercm Loadstep146	ErcmLoadstep146	ReadOnly	UINT32
489	Ercm Loadstep147	ErcmLoadstep147	ReadOnly	UINT32
491	Ercm Loadstep148	ErcmLoadstep148	ReadOnly	UINT32
493	Ercm Loadstep149	ErcmLoadstep149	ReadOnly	UINT32
495	Ercm Loadstep150	ErcmLoadstep150	ReadOnly	UINT32
497	Discharge Conditions Effect On Cylinder 2	DischargeConditionsEffectOnCylinder2	ReadOnly	FLOAT32
499	Discharge Conditions Effect On Cylinder 3	DischargeConditionsEffectOnCylinder3	ReadOnly	FLOAT32
501	Discharge Conditions Effect On Cylinder 4	DischargeConditionsEffectOnCylinder4	ReadOnly	FLOAT32
503	Discharge Conditions Effect On Cylinder 5	DischargeConditionsEffectOnCylinder5	ReadOnly	FLOAT32
505	Discharge Conditions Effect On Cylinder 6	DischargeConditionsEffectOnCylinder6	ReadOnly	FLOAT32
507	Range Suction Pressure Min	RngSctPressMin	ReadOnly	FLOAT32
509	Range Suction Pressure Max	RngSctPressMax	ReadOnly	FLOAT32
511	Range Discharge Pressure Min	RngDischPressMin	ReadOnly	FLOAT32
513	Range Discharge Pressure Max	RngDischPressMax	ReadOnly	FLOAT32
515	Range Speed Min	RngSpeedMin	ReadOnly	FLOAT32

517	Range Speed Max	RngSpeedMax	ReadOnly	FLOAT32
519	Range Torque Min	RngTorqueMin	ReadOnly	FLOAT32
521	Range Torque Max	RngTorqueMax	ReadOnly	FLOAT32
523	Range Ambient Temp Min	RngAmbTempMin	ReadOnly	FLOAT32
525	Range Ambient Temp Max	RngAmbTempMax	ReadOnly	FLOAT32
527	Range Stage 1 Temp Min	RngTs1Min	ReadOnly	FLOAT32
529	Range Stage 1 Temp Max	RngTs1Max	ReadOnly	FLOAT32
531	Range Stage 2 Temp Min	RngTs2Min	ReadOnly	FLOAT32
533	Range Stage 2 Temp Max	RngTs2Max	ReadOnly	FLOAT32
535	Range Stage 3 Temp Min	RngTs3Min	ReadOnly	FLOAT32
537	Range Stage 3 Temp Max	RngTs3Max	ReadOnly	FLOAT32
539	Range Stage 4 Temp Min	RngTs4Min	ReadOnly	FLOAT32
541	Range Stage 4 Temp Max	RngTs4Max	ReadOnly	FLOAT32
543	Range Stage 5 Temp Min	RngTs5Min	ReadOnly	FLOAT32
545	Range Stage 5 Temp Max	RngTs5Max	ReadOnly	FLOAT32
547	Range Stage 6 Temp Min	RngTs6Min	ReadOnly	FLOAT32
549	Range Stage 6 Temp Max	RngTs6Max	ReadOnly	FLOAT32
551	Throw 1 Gas Flange Compression %	Thrw1GasFlgComprsPct	ReadOnly	FLOAT32
553	Throw 1 Gas Flange Tension %	Thrw1GasFlgTensnPct	ReadOnly	FLOAT32
555	Throw 1 Internal Gas Compression %	Thrw1IntGasComprsPct	ReadOnly	FLOAT32
557	Throw 1 Internal Gas Tension %	Thrw1IntGasTensnPct	ReadOnly	FLOAT32
559	Throw 1 Gas+Recip Weights Compression %	Thrw1GasRecipWtComprsPct	ReadOnly	FLOAT32
561	Throw 1 Gas+Recip Weights Tension %	Thrw1GasRecipWtTensnPct	ReadOnly	FLOAT32
563	Throw 1 Power %	Thrw1PwrPct	ReadOnly	FLOAT32
565	Throw 1 Gas Flange Compression Limit	Thrw1GasFlgComprsLim	ReadOnly	FLOAT32
567	Throw 1 Gas Flange Tension Limit	Thrw1GasFlgTensnLim	ReadOnly	FLOAT32
569	Throw 1 Internal Gas Compression Limit	Thrw1IntGasComprsLim	ReadOnly	FLOAT32
571	Throw 1 Internal Gas Tension Limit	Thrw1IntGasTensnLim	ReadOnly	FLOAT32
573	Throw 1 Gas+Recip Weights Compression Limit	Thrw1GasRecipWtComprsLim	ReadOnly	FLOAT32
575	Throw 1 Gas+Recip Weights Tension Limit	Thrw1GasRecipWtTensnLim	ReadOnly	FLOAT32
577	Throw 1 Passed Pin Reversals	Thrw1PinRevPass	ReadOnly	FLOAT32
579	Throw 1 Tandem Cylinder Present	Thrw1TandemCyl	ReadOnly	FLOAT32
581	Throw 1 Power (HP)	Thrw1PwrHP	ReadOnly	FLOAT32
583	Throw 1 Outboard Cylinder	Thrw1CylOutbd	ReadOnly	FLOAT32
585	Throw 1 Inboard Cylinder	Thrw1CylInbd	ReadOnly	FLOAT32
587	Throw 1 Compression Angle (Degrees)	Thrw1CrankComprsDeg	ReadOnly	FLOAT32
589	Throw 1 Tension Angle (Degrees)	Thrw1CrankTensnDeg	ReadOnly	FLOAT32
591	Throw 1 Recip Weights (lbs)	Thrw1RecipWtRLLbs	ReadOnly	FLOAT32
593	Throw 1 Reversal Weight (lbs)	Thrw1RevWtPinLbs	ReadOnly	FLOAT32
595	Throw 1 Gas Flange Rod Load Compression	Thrw1GasFlgRLComprsLbf	ReadOnly	FLOAT32
597	Throw 1 Net Rod Load Compression	Thrw1NetRLComprsLbf	ReadOnly	FLOAT32

599	Throw 1 Net Rod Load Tension	Thrw1NetRLTensnLbf	ReadOnly	FLOAT32
601	Throw 1 Gas Flange Rod Load Tension	Thrw1GasFlgRLTensnLbf	ReadOnly	FLOAT32
603	Throw 1 Internal Gas Rod Load Compression	Thrw1IntGasRLComprsLbf	ReadOnly	FLOAT32
605	Throw 1 Internal Gas Rod Load Tension	Thrw1IntGasRLTensnLbf	ReadOnly	FLOAT32
607	Throw 2 Gas Flange Compression %	Thrw2GasFlgComprsPct	ReadOnly	FLOAT32
609	Throw 2 Gas Flange Tension %	Thrw2GasFlgTensnPct	ReadOnly	FLOAT32
611	Throw 2 Internal Gas Compression %	Thrw2IntGasComprsPct	ReadOnly	FLOAT32
613	Throw 2 Internal Gas Tension %	Thrw2IntGasTensnPct	ReadOnly	FLOAT32
615	Throw 2 Gas+Recip Weights Compression %	Thrw2GasRecipWtComprsPct	ReadOnly	FLOAT32
617	Throw 2 Gas+Recip Weights Tension %	Thrw2GasRecipWtTensnPct	ReadOnly	FLOAT32
619	Throw 2 Power %	Thrw2PwrPct	ReadOnly	FLOAT32
621	Throw 2 Gas Flange Compression Limit	Thrw2GasFlgComprsLim	ReadOnly	FLOAT32
623	Throw 2 Gas Flange Tension Limit	Thrw2GasFlgTensnLim	ReadOnly	FLOAT32
625	Throw 2 Internal Gas Compression Limit	Thrw2IntGasComprsLim	ReadOnly	FLOAT32
627	Throw 2 Internal Gas Tension Limit	Thrw2IntGasTensnLim	ReadOnly	FLOAT32
629	Throw 2 Gas+Recip Weights Compression Limit	Thrw2GasRecipWtComprsLim	ReadOnly	FLOAT32
631	Throw 2 Gas+Recip Weights Tension Limit	Thrw2GasRecipWtTensnLim	ReadOnly	FLOAT32
633	Throw 2 Passed Pin Reversals	Thrw2PinRevPass	ReadOnly	FLOAT32
635	Throw 2 Tandem Cylinder Present	Thrw2TandemCyl	ReadOnly	FLOAT32
637	Throw 2 Power (HP)	Thrw2PwrHP	ReadOnly	FLOAT32
639	Throw 2 Outboard Cylinder	Thrw2CylOutbd	ReadOnly	FLOAT32
641	Throw 2 Inboard Cylinder	Thrw2CylInbd	ReadOnly	FLOAT32
643	Throw 2 Compression Angle (Degrees)	Thrw2CrankComprsDeg	ReadOnly	FLOAT32
645	Throw 2 Tension Angle (Degrees)	Thrw2CrankTensnDeg	ReadOnly	FLOAT32
647	Throw 2 Recip Weights (lbs)	Thrw2RecipWtRLLbs	ReadOnly	FLOAT32
649	Throw 2 Reversal Weight (lbs)	Thrw2RevWtPinLbs	ReadOnly	FLOAT32
651	Throw 2 Gas Flange Rod Load Compression	Thrw2GasFlgRLComprsLbf	ReadOnly	FLOAT32
653	Throw 2 Net Rod Load Compression	Thrw2NetRLComprsLbf	ReadOnly	FLOAT32
655	Throw 2 Net Rod Load Tension	Thrw2NetRLTensnLbf	ReadOnly	FLOAT32
657	Throw 2 Gas Flange Rod Load Tension	Thrw2GasFlgRLTensnLbf	ReadOnly	FLOAT32
659	Throw 2 Internal Gas Rod Load Compression	Thrw2IntGasRLComprsLbf	ReadOnly	FLOAT32
661	Throw 2 Internal Gas Rod Load Tension	Thrw2IntGasRLTensnLbf	ReadOnly	FLOAT32
663	Throw 3 Gas Flange Compression %	Thrw3GasFlgComprsPct	ReadOnly	FLOAT32
665	Throw 3 Gas Flange Tension %	Thrw3GasFlgTensnPct	ReadOnly	FLOAT32
667	Throw 3 Internal Gas Compression %	Thrw3IntGasComprsPct	ReadOnly	FLOAT32
669	Throw 3 Internal Gas Tension %	Thrw3IntGasTensnPct	ReadOnly	FLOAT32
671	Throw 3 Gas+Recip Weights Compression %	Thrw3GasRecipWtComprsPct	ReadOnly	FLOAT32
673	Throw 3 Gas+Recip Weights Tension %	Thrw3GasRecipWtTensnPct	ReadOnly	FLOAT32
675	Throw 3 Power %	Thrw3PwrPct	ReadOnly	FLOAT32
677	Throw 3 Gas Flange Compression Limit	Thrw3GasFlgComprsLim	ReadOnly	FLOAT32
679	Throw 3 Gas Flange Tension Limit	Thrw3GasFlgTensnLim	ReadOnly	FLOAT32

681	Throw 3 Internal Gas Compression Limit	Thrw3IntGasComprsLim	ReadOnly	FLOAT32
683	Throw 3 Internal Gas Tension Limit	Thrw3IntGasTensnLim	ReadOnly	FLOAT32
685	Throw 3 Gas+Recip Weights Compression Limit	Thrw3GasRecipWtComprsLim	ReadOnly	FLOAT32
687	Throw 3 Gas+Recip Weights Tension Limit	Thrw3GasRecipWtTensnLim	ReadOnly	FLOAT32
689	Throw 3 Passed Pin Reversals	Thrw3PinRevPass	ReadOnly	FLOAT32
691	Throw 3 Tandem Cylinder Present	Thrw3TandemCyl	ReadOnly	FLOAT32
693	Throw 3 Power (HP)	Thrw3PwrHP	ReadOnly	FLOAT32
695	Throw 3 Outboard Cylinder	Thrw3CylOutbd	ReadOnly	FLOAT32
697	Throw 3 Inboard Cylinder	Thrw3CylInbd	ReadOnly	FLOAT32
699	Throw 3 Compression Angle (Degrees)	Thrw3CrankComprsDeg	ReadOnly	FLOAT32
701	Throw 3 Tension Angle (Degrees)	Thrw3CrankTensnDeg	ReadOnly	FLOAT32
703	Throw 3 Recip Weights (lbs)	Thrw3RecipWtRLLbs	ReadOnly	FLOAT32
705	Throw 3 Reversal Weight (lbs)	Thrw3RevWtPinLbs	ReadOnly	FLOAT32
707	Throw 3 Gas Flange Rod Load Compression	Thrw3GasFlgRLComprsLbf	ReadOnly	FLOAT32
709	Throw 3 Net Rod Load Compression	Thrw3NetRLComprsLbf	ReadOnly	FLOAT32
711	Throw 3 Net Rod Load Tension	Thrw3NetRLTensnLbf	ReadOnly	FLOAT32
713	Throw 3 Gas Flange Rod Load Tension	Thrw3GasFlgRLTensnLbf	ReadOnly	FLOAT32
715	Throw 3 Internal Gas Rod Load Compression	Thrw3IntGasRLComprsLbf	ReadOnly	FLOAT32
717	Throw 3 Internal Gas Rod Load Tension	Thrw3IntGasRLTensnLbf	ReadOnly	FLOAT32
719	Throw 4 Gas Flange Compression %	Thrw4GasFlgComprsPct	ReadOnly	FLOAT32
721	Throw 4 Gas Flange Tension %	Thrw4GasFlgTensnPct	ReadOnly	FLOAT32
723	Throw 4 Internal Gas Compression %	Thrw4IntGasComprsPct	ReadOnly	FLOAT32
725	Throw 4 Internal Gas Tension %	Thrw4IntGasTensnPct	ReadOnly	FLOAT32
727	Throw 4 Gas+Recip Weights Compression %	Thrw4GasRecipWtComprsPct	ReadOnly	FLOAT32
729	Throw 4 Gas+Recip Weights Tension %	Thrw4GasRecipWtTensnPct	ReadOnly	FLOAT32
731	Throw 4 Power %	Thrw4PwrPct	ReadOnly	FLOAT32
733	Throw 4 Gas Flange Compression Limit	Thrw4GasFlgComprsLim	ReadOnly	FLOAT32
735	Throw 4 Gas Flange Tension Limit	Thrw4GasFlgTensnLim	ReadOnly	FLOAT32
737	Throw 4 Internal Gas Compression Limit	Thrw4IntGasComprsLim	ReadOnly	FLOAT32
739	Throw 4 Internal Gas Tension Limit	Thrw4IntGasTensnLim	ReadOnly	FLOAT32
741	Throw 4 Gas+Recip Weights Compression Limit	Thrw4GasRecipWtComprsLim	ReadOnly	FLOAT32
743	Throw 4 Gas+Recip Weights Tension Limit	Thrw4GasRecipWtTensnLim	ReadOnly	FLOAT32
745	Throw 4 Passed Pin Reversals	Thrw4PinRevPass	ReadOnly	FLOAT32
747	Throw 4 Tandem Cylinder Present	Thrw4TandemCyl	ReadOnly	FLOAT32
749	Throw 4 Power (HP)	Thrw4PwrHP	ReadOnly	FLOAT32
751	Throw 4 Outboard Cylinder	Thrw4CylOutbd	ReadOnly	FLOAT32
753	Throw 4 Inboard Cylinder	Thrw4CylInbd	ReadOnly	FLOAT32
755	Throw 4 Compression Angle (Degrees)	Thrw4CrankComprsDeg	ReadOnly	FLOAT32
757	Throw 4 Tension Angle (Degrees)	Thrw4CrankTensnDeg	ReadOnly	FLOAT32
759	Throw 4 Recip Weights (lbs)	Thrw4RecipWtRLLbs	ReadOnly	FLOAT32
761	Throw 4 Reversal Weight (lbs)	Thrw4RevWtPinLbs	ReadOnly	FLOAT32

763	Throw 4 Gas Flange Rod Load Compression	Thrw4GasFlgRLComprsLbf	ReadOnly	FLOAT32
765	Throw 4 Net Rod Load Compression	Thrw4NetRLComprsLbf	ReadOnly	FLOAT32
767	Throw 4 Net Rod Load Tension	Thrw4NetRLTensnLbf	ReadOnly	FLOAT32
769	Throw 4 Gas Flange Rod Load Tension	Thrw4GasFlgRLTensnLbf	ReadOnly	FLOAT32
771	Throw 4 Internal Gas Rod Load Compression	Thrw4IntGasRLComprsLbf	ReadOnly	FLOAT32
773	Throw 4 Internal Gas Rod Load Tension	Thrw4IntGasRLTensnLbf	ReadOnly	FLOAT32
775	Throw 5 Gas Flange Compression %	Thrw5GasFlgComprsPct	ReadOnly	FLOAT32
777	Throw 5 Gas Flange Tension %	Thrw5GasFlgTensnPct	ReadOnly	FLOAT32
779	Throw 5 Internal Gas Compression %	Thrw5IntGasComprsPct	ReadOnly	FLOAT32
781	Throw 5 Internal Gas Tension %	Thrw5IntGasTensnPct	ReadOnly	FLOAT32
783	Throw 5 Gas+Recip Weights Compression %	Thrw5GasRecipWtComprsPct	ReadOnly	FLOAT32
785	Throw 5 Gas+Recip Weights Tension %	Thrw5GasRecipWtTensnPct	ReadOnly	FLOAT32
787	Throw 5 Power %	Thrw5PwrPct	ReadOnly	FLOAT32
789	Throw 5 Gas Flange Compression Limit	Thrw5GasFlgComprsLim	ReadOnly	FLOAT32
791	Throw 5 Gas Flange Tension Limit	Thrw5GasFlgTensnLim	ReadOnly	FLOAT32
793	Throw 5 Internal Gas Compression Limit	Thrw5IntGasComprsLim	ReadOnly	FLOAT32
795	Throw 5 Internal Gas Tension Limit	Thrw5IntGasTensnLim	ReadOnly	FLOAT32
797	Throw 5 Gas+Recip Weights Compression Limit	Thrw5GasRecipWtComprsLim	ReadOnly	FLOAT32
799	Throw 5 Gas+Recip Weights Tension Limit	Thrw5GasRecipWtTensnLim	ReadOnly	FLOAT32
801	Throw 5 Passed Pin Reversals	Thrw5PinRevPass	ReadOnly	FLOAT32
803	Throw 5 Tandem Cylinder Present	Thrw5TandemCyl	ReadOnly	FLOAT32
805	Throw 5 Power (HP)	Thrw5PwrHP	ReadOnly	FLOAT32
807	Throw 5 Outboard Cylinder	Thrw5CylOutbd	ReadOnly	FLOAT32
809	Throw 5 Inboard Cylinder	Thrw5CylInbd	ReadOnly	FLOAT32
811	Throw 5 Compression Angle (Degrees)	Thrw5CrankComprsDeg	ReadOnly	FLOAT32
813	Throw 5 Tension Angle (Degrees)	Thrw5CrankTensnDeg	ReadOnly	FLOAT32
815	Throw 5 Recip Weights (lbs)	Thrw5RecipWtRLLbs	ReadOnly	FLOAT32
817	Throw 5 Reversal Weight (lbs)	Thrw5RevWtPinLbs	ReadOnly	FLOAT32
819	Throw 5 Gas Flange Rod Load Compression	Thrw5GasFlgRLComprsLbf	ReadOnly	FLOAT32
821	Throw 5 Net Rod Load Compression	Thrw5NetRLComprsLbf	ReadOnly	FLOAT32
823	Throw 5 Net Rod Load Tension	Thrw5NetRLTensnLbf	ReadOnly	FLOAT32
825	Throw 5 Gas Flange Rod Load Tension	Thrw5GasFlgRLTensnLbf	ReadOnly	FLOAT32
827	Throw 5 Internal Gas Rod Load Compression	Thrw5IntGasRLComprsLbf	ReadOnly	FLOAT32
829	Throw 5 Internal Gas Rod Load Tension	Thrw5IntGasRLTensnLbf	ReadOnly	FLOAT32
831	Throw 6 Gas Flange Compression %	Thrw6GasFlgComprsPct	ReadOnly	FLOAT32
833	Throw 6 Gas Flange Tension %	Thrw6GasFlgTensnPct	ReadOnly	FLOAT32
835	Throw 6 Internal Gas Compression %	Thrw6IntGasComprsPct	ReadOnly	FLOAT32
837	Throw 6 Internal Gas Tension %	Thrw6IntGasTensnPct	ReadOnly	FLOAT32
839	Throw 6 Gas+Recip Weights Compression %	Thrw6GasRecipWtComprsPct	ReadOnly	FLOAT32
841	Throw 6 Gas+Recip Weights Tension %	Thrw6GasRecipWtTensnPct	ReadOnly	FLOAT32
843	Throw 6 Power %	Thrw6PwrPct	ReadOnly	FLOAT32

845	Throw 6 Gas Flange Compression Limit	Thrw6GasFlgComprsLim	ReadOnly	FLOAT32
847	Throw 6 Gas Flange Tension Limit	Thrw6GasFlgTensnLim	ReadOnly	FLOAT32
849	Throw 6 Internal Gas Compression Limit	Thrw6IntGasComprsLim	ReadOnly	FLOAT32
851	Throw 6 Internal Gas Tension Limit	Thrw6IntGasTensnLim	ReadOnly	FLOAT32
853	Throw 6 Gas+Recip Weights Compression Limit	Thrw6GasRecipWtComprsLim	ReadOnly	FLOAT32
855	Throw 6 Gas+Recip Weights Tension Limit	Thrw6GasRecipWtTensnLim	ReadOnly	FLOAT32
857	Throw 6 Passed Pin Reversals	Thrw6PinRevPass	ReadOnly	FLOAT32
859	Throw 6 Tandem Cylinder Present	Thrw6TandemCyl	ReadOnly	FLOAT32
861	Throw 6 Power (HP)	Thrw6PwrHP	ReadOnly	FLOAT32
863	Throw 6 Outboard Cylinder	Thrw6CylOutbd	ReadOnly	FLOAT32
865	Throw 6 Inboard Cylinder	Thrw6CylInbd	ReadOnly	FLOAT32
867	Throw 6 Compression Angle (Degrees)	Thrw6CrankComprsDeg	ReadOnly	FLOAT32
869	Throw 6 Tension Angle (Degrees)	Thrw6CrankTensnDeg	ReadOnly	FLOAT32
871	Throw 6 Recip Weights (lbs)	Thrw6RecipWtRLLbs	ReadOnly	FLOAT32
873	Throw 6 Reversal Weight (lbs)	Thrw6RevWtPinLbs	ReadOnly	FLOAT32
875	Throw 6 Gas Flange Rod Load Compression	Thrw6GasFlgRLComprsLbf	ReadOnly	FLOAT32
877	Throw 6 Net Rod Load Compression	Thrw6NetRLComprsLbf	ReadOnly	FLOAT32
879	Throw 6 Net Rod Load Tension	Thrw6NetRLTensnLbf	ReadOnly	FLOAT32
881	Throw 6 Gas Flange Rod Load Tension	Thrw6GasFlgRLTensnLbf	ReadOnly	FLOAT32
883	Throw 6 Internal Gas Rod Load Compression	Thrw6IntGasRLComprsLbf	ReadOnly	FLOAT32
885	Throw 6 Internal Gas Rod Load Tension	Thrw6IntGasRLTensnLbf	ReadOnly	FLOAT32
887	Stage 1 Suction Pressure at Gauge	stg1SucPresGaugePsig	ReadOnly	FLOAT32
889	Stage 1 Discharge Pressure at Gauge	stg1DischPresGaugePsig	ReadOnly	FLOAT32
891	Stage 1 Suction Pressure	stg1SucPresPsig	ReadOnly	FLOAT32
893	Stage 1 Discharge Pressure	stg1DischPresPsig	ReadOnly	FLOAT32
895	Stage 1 Discharge Pressure (flange)	stg1DischPresFlangePsia	ReadOnly	FLOAT32
897	Stage 1 Suction Pressure (flange)	stg1SucPresFlangePsia	ReadOnly	FLOAT32
899	Stage 1 Suction Temp	stg1SucTempF	ReadOnly	FLOAT32
901	Stage 1 Adiabatic Discharge Temp	stg1AdiaDischTempF	ReadOnly	FLOAT32
903	Stage 1 Discharge Temp	stg1DischTempR	ReadOnly	FLOAT32
905	Stage 1 Z-Suction	stg1ZSucCompFact	ReadOnly	FLOAT32
907	Stage 1 Z-Discharge	stg1ZDischCompFact	ReadOnly	FLOAT32
909	Stage 1 Base Conditions Compressibility	stg1CompFactBase	ReadOnly	FLOAT32
911	Stage 1 K-Value	stg1GasKVal	ReadOnly	FLOAT32
913	Stage 1 Specific Gravity	stg1SpecGrav	ReadOnly	FLOAT32
915	Stage 1 Molecular Weight	stg1MoleWt	ReadOnly	FLOAT32
917	Stage 1 Compression Ratio	stg1CompRatio	ReadOnly	FLOAT32
919	Stage 1 Stage Load (BHP)	stg1LoadBHP	ReadOnly	FLOAT32
921	Stage 1 Flow (MMscfd)	stg1FlowMMscfd	ReadOnly	FLOAT32
923	Stage 1 Base Temperature (°F)	stg1BaseTempF	ReadOnly	FLOAT32
925	Stage 2 Suction Pressure at Gauge	stg2SucPresGaugePsig	ReadOnly	FLOAT32

927	Stage 2 Discharge Pressure at Gauge	stg2DischPresGaugePsig	ReadOnly	FLOAT32
929	Stage 2 Suction Pressure	stg2SucPresPsig	ReadOnly	FLOAT32
931	Stage 2 Discharge Pressure	stg2DischPresPsig	ReadOnly	FLOAT32
933	Stage 2 Discharge Pressure (flange)	stg2DischPresFlangePsia	ReadOnly	FLOAT32
935	Stage 2 Suction Pressure (flange)	stg2SucPresFlangePsia	ReadOnly	FLOAT32
937	Stage 2 Suction Temp	stg2SucTempF	ReadOnly	FLOAT32
939	Stage 2 Adiabatic Discharge Temp	stg2AdiaDischTempF	ReadOnly	FLOAT32
941	Stage 2 Discharge Temp	stg2DischTempR	ReadOnly	FLOAT32
943	Stage 2 Z-Suction	stg2ZSucCompFact	ReadOnly	FLOAT32
945	Stage 2 Z-Discharge	stg2ZDischCompFact	ReadOnly	FLOAT32
947	Stage 2 Base Conditions Compressibility	stg2CompFactBase	ReadOnly	FLOAT32
949	Stage 2 K-Value	stg2GasKVal	ReadOnly	FLOAT32
951	Stage 2 Specific Gravity	stg2SpecGrav	ReadOnly	FLOAT32
953	Stage 2 Molecular Weight	stg2MoleWt	ReadOnly	FLOAT32
955	Stage 2 Compression Ratio	stg2CompRatio	ReadOnly	FLOAT32
957	Stage 2 Stage Load (BHP)	stg2LoadBHP	ReadOnly	FLOAT32
959	Stage 2 Flow (MMscfd)	stg2FlowMMscfd	ReadOnly	FLOAT32
961	Stage 2 Base Temperature (°F)	stg2BaseTempF	ReadOnly	FLOAT32
963	Stage 3 Suction Pressure at Gauge	stg3SucPresGaugePsig	ReadOnly	FLOAT32
965	Stage 3 Discharge Pressure at Gauge	stg3DischPresGaugePsig	ReadOnly	FLOAT32
967	Stage 3 Suction Pressure	stg3SucPresPsig	ReadOnly	FLOAT32
969	Stage 3 Discharge Pressure	stg3DischPresPsig	ReadOnly	FLOAT32
971	Stage 3 Discharge Pressure (flange)	stg3DischPresFlangePsia	ReadOnly	FLOAT32
973	Stage 3 Suction Pressure (flange)	stg3SucPresFlangePsia	ReadOnly	FLOAT32
975	Stage 3 Suction Temp	stg3SucTempF	ReadOnly	FLOAT32
977	Stage 3 Adiabatic Discharge Temp	stg3AdiaDischTempF	ReadOnly	FLOAT32
979	Stage 3 Discharge Temp	stg3DischTempR	ReadOnly	FLOAT32
981	Stage 3 Z-Suction	stg3ZSucCompFact	ReadOnly	FLOAT32
983	Stage 3 Z-Discharge	stg3ZDischCompFact	ReadOnly	FLOAT32
985	Stage 3 Base Conditions Compressibility	stg3CompFactBase	ReadOnly	FLOAT32
987	Stage 3 K-Value	stg3GasKVal	ReadOnly	FLOAT32
989	Stage 3 Specific Gravity	stg3SpecGrav	ReadOnly	FLOAT32
991	Stage 3 Molecular Weight	stg3MoleWt	ReadOnly	FLOAT32
993	Stage 3 Compression Ratio	stg3CompRatio	ReadOnly	FLOAT32
995	Stage 3 Stage Load (BHP)	stg3LoadBHP	ReadOnly	FLOAT32
997	Stage 3 Flow (MMscfd)	stg3FlowMMscfd	ReadOnly	FLOAT32
999	Stage 3 Base Temperature (°F)	stg3BaseTempF	ReadOnly	FLOAT32
1001	Stage 4 Suction Pressure at Gauge	stg4SucPresGaugePsig	ReadOnly	FLOAT32
1003	Stage 4 Discharge Pressure at Gauge	stg4DischPresGaugePsig	ReadOnly	FLOAT32
1005	Stage 4 Suction Pressure	stg4SucPresPsig	ReadOnly	FLOAT32
1007	Stage 4 Discharge Pressure	stg4DischPresPsig	ReadOnly	FLOAT32

1009	Stage 4 Discharge Pressure (flange)	stg4DischPresFlangePsia	ReadOnly	FLOAT32
1011	Stage 4 Suction Pressure (flange)	stg4SucPresFlangePsia	ReadOnly	FLOAT32
1013	Stage 4 Suction Temp	stg4SucTempF	ReadOnly	FLOAT32
1015	Stage 4 Adiabatic Discharge Temp	stg4AdiaDischTempF	ReadOnly	FLOAT32
1017	Stage 4 Discharge Temp	stg4DischTempR	ReadOnly	FLOAT32
1019	Stage 4 Z-Suction	stg4ZSucCompFact	ReadOnly	FLOAT32
1021	Stage 4 Z-Discharge	stg4ZDischCompFact	ReadOnly	FLOAT32
1023	Stage 4 Base Conditions Compressibility	stg4CompFactBase	ReadOnly	FLOAT32
1025	Stage 4 K-Value	stg4GasKVal	ReadOnly	FLOAT32
1027	Stage 4 Specific Gravity	stg4SpecGrav	ReadOnly	FLOAT32
1029	Stage 4 Molecular Weight	stg4MoleWt	ReadOnly	FLOAT32
1031	Stage 4 Compression Ratio	stg4CompRatio	ReadOnly	FLOAT32
1033	Stage 4 Stage Load (BHP)	stg4LoadBHP	ReadOnly	FLOAT32
1035	Stage 4 Flow (MMscfd)	stg4FlowMMscfd	ReadOnly	FLOAT32
1037	Stage 4 Base Temperature (°F)	stg4BaseTempF	ReadOnly	FLOAT32
1039	Stage 5 Suction Pressure at Gauge	stg5SucPresGaugePsig	ReadOnly	FLOAT32
1041	Stage 5 Discharge Pressure at Gauge	stg5DischPresGaugePsig	ReadOnly	FLOAT32
1043	Stage 5 Suction Pressure	stg5SucPresPsig	ReadOnly	FLOAT32
1045	Stage 5 Discharge Pressure	stg5DischPresPsig	ReadOnly	FLOAT32
1047	Stage 5 Discharge Pressure (flange)	stg5DischPresFlangePsia	ReadOnly	FLOAT32
1049	Stage 5 Suction Pressure (flange)	stg5SucPresFlangePsia	ReadOnly	FLOAT32
1051	Stage 5 Suction Temp	stg5SucTempF	ReadOnly	FLOAT32
1053	Stage 5 Adiabatic Discharge Temp	stg5AdiaDischTempF	ReadOnly	FLOAT32
1055	Stage 5 Discharge Temp	stg5DischTempR	ReadOnly	FLOAT32
1057	Stage 5 Z-Suction	stg5ZSucCompFact	ReadOnly	FLOAT32
1059	Stage 5 Z-Discharge	stg5ZDischCompFact	ReadOnly	FLOAT32
1061	Stage 5 Base Conditions Compressibility	stg5CompFactBase	ReadOnly	FLOAT32
1063	Stage 5 K-Value	stg5GasKVal	ReadOnly	FLOAT32
1065	Stage 5 Specific Gravity	stg5SpecGrav	ReadOnly	FLOAT32
1067	Stage 5 Molecular Weight	stg5MoleWt	ReadOnly	FLOAT32
1069	Stage 5 Compression Ratio	stg5CompRatio	ReadOnly	FLOAT32
1071	Stage 5 Stage Load (BHP)	stg5LoadBHP	ReadOnly	FLOAT32
1073	Stage 5 Flow (MMscfd)	stg5FlowMMscfd	ReadOnly	FLOAT32
1075	Stage 5 Base Temperature (°F)	stg5BaseTempF	ReadOnly	FLOAT32
1077	HE Cyl1 Suction Pressure into cylinder (psig)	hecyl1SucPresPsig	ReadOnly	FLOAT32
1079	HE Cyl1 Discharge Pressure out of cylinder (psig)	hecyl1DischPresPsig	ReadOnly	FLOAT32
1081	HE Cyl1 Suction temperature of gas into cylinder (°F)	hecyl1SucTempF	ReadOnly	FLOAT32
1083	HE Cyl1 Estimated discharge temperature of cylinder (°F)	hecyl1DischTempF	ReadOnly	FLOAT32
1085	HE Cyl1 Z-Suction Compressibility Factor	hecyl1ZSucCompFact	ReadOnly	FLOAT32
1087	HE Cyl1 Z-Discharge Compressibility Factor	hecyl1ZDischCompFact	ReadOnly	FLOAT32

1089	HE Cyl1 Suction Volumetric Efficiency (%)	hecyl1SucVolEffPct	ReadOnly	FLOAT32
1091	HE Cyl1 Discharge Volumetric Efficiency (%)	hecyl1DischVolEffPct	ReadOnly	FLOAT32
1093	HE Cyl1 Fixed clearance (%) of cylinder end	hecyl1FixClrPct	ReadOnly	FLOAT32
1095	HE Cyl1 Effective clearance (%) of cylinder end	hecyl1EffClrPct	ReadOnly	FLOAT32
1097	HE Cyl1 Isentropic Efficiency (%) per end	hecyl1IsenEffPct	ReadOnly	FLOAT32
1099	HE Cyl1 Adiabatic horsepower (BHP) used to compress gas per end	hecyl1AdiaBHP	ReadOnly	FLOAT32
1101	HE Cyl1 Valve loss (BHP) used to move gas through valves	hecyl1ValveLossBHP	ReadOnly	FLOAT32
1103	HE Cyl1 Parasitic loss (BHP) used when end is deactivated	hecyl1ParasiticLossBHP	ReadOnly	FLOAT32
1105	HE Cyl1 Total load (BHP) used per end	hecyl1TotalLoadBHP	ReadOnly	FLOAT32
1107	HE Cyl1 Flow (MMscfd) per end	hecyl1FlowMMscfd	ReadOnly	FLOAT32
1109	HE Cyl1 Which Stage of compression this cylinder serves	hecyl1StageNum	ReadOnly	FLOAT32
1111	HE Cyl1 Bore Diameter (in)	hecyl1BoreDiaIn	ReadOnly	FLOAT32
1113	HE Cyl1 Rod Diameter (in)	hecyl1RodDiaIn	ReadOnly	FLOAT32
1115	HE Cyl1 End Active	hecyl1EndActive	ReadOnly	FLOAT32
1117	HE Cyl1 Cylinder Friction (fraction)	hecyl1FrictionFrac	ReadOnly	FLOAT32
1119	HE Cyl1 Cylinder Slippage (fraction)	hecyl1SlippageFrac	ReadOnly	FLOAT32
1121	HE Cyl1 Deactivation Pressure source used	hecyl1DeactPresSrc	ReadOnly	FLOAT32
1123	HE Cyl1 Cylinder MAWP or max allowed pressure (psiG)	hecyl1MAWPPsig	ReadOnly	FLOAT32
1125	HE Cyl1 Suction Valves in Active Compression Mode	hecyl1SucVlvActive	ReadOnly	FLOAT32
1127	HE Cyl1 Discharge Valves in Active Compression Mode	hecyl1DischVlvActive	ReadOnly	FLOAT32
1129	HE Cyl1 Suction Valves in Deactivated End Mode	hecyl1SucVlvDeact	ReadOnly	FLOAT32
1131	HE Cyl1 Discharge Valves in Deactivated End Mode	hecyl1DischVlvDeact	ReadOnly	FLOAT32
1133	HE Cyl1 Throw Number on which this cylinder is located	hecyl1ThrowNum	ReadOnly	FLOAT32
1135	HE Cyl1 Mean Cylinder Internal Pressure (psiG)	hecyl1MeanPresPsig	ReadOnly	FLOAT32
1137	HE Cyl1 Maximum allowed Discharge Temperature (°F)	hecyl1MaxDischTempF	ReadOnly	FLOAT32
1139	HE Cyl1 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl1StrokeLenIn	ReadOnly	FLOAT32
1141	HE Cyl1 Special IPASS's VLVRf-Suction	hecyl1VLVRfSuc	ReadOnly	FLOAT32
1143	HE Cyl1 Special IPASS's VLVRf-Discharge	hecyl1VLVRfDisch	ReadOnly	FLOAT32
1145	HE Cyl2 Suction Pressure into cylinder (psig)	hecyl2SucPresPsig	ReadOnly	FLOAT32
1147	HE Cyl2 Discharge Pressure out of cylinder (psig)	hecyl2DischPresPsig	ReadOnly	FLOAT32
1149	HE Cyl2 Suction temperature of gas into cylinder (°F)	hecyl2SucTempF	ReadOnly	FLOAT32
1151	HE Cyl2 Estimated discharge temperature of cylinder (°F)	hecyl2DischTempF	ReadOnly	FLOAT32
1153	HE Cyl2 Z-Suction Compressibility Factor	hecyl2ZSucCompFact	ReadOnly	FLOAT32
1155	HE Cyl2 Z-Discharge Compressibility Factor	hecyl2ZDischCompFact	ReadOnly	FLOAT32
1157	HE Cyl2 Suction Volumetric Efficiency (%)	hecyl2SucVolEffPct	ReadOnly	FLOAT32

1159	HE Cyl2 Discharge Volumetric Efficiency (%)	hecyl2DischVolEffPct	ReadOnly	FLOAT32
1161	HE Cyl2 Fixed clearance (%) of cylinder end	hecyl2FixClrPct	ReadOnly	FLOAT32
1163	HE Cyl2 Effective clearance (%) of cylinder end	hecyl2EffClrPct	ReadOnly	FLOAT32
1165	HE Cyl2 Isentropic Efficiency (%) per end	hecyl2IsenEffPct	ReadOnly	FLOAT32
1167	HE Cyl2 Adiabatic horsepower (BHP) used to compress gas per end	hecyl2AdiaBHP	ReadOnly	FLOAT32
1169	HE Cyl2 Valve loss (BHP) used to move gas through valves	hecyl2ValveLossBHP	ReadOnly	FLOAT32
1171	HE Cyl2 Parasitic loss (BHP) used when end is deactivated	hecyl2ParasiticLossBHP	ReadOnly	FLOAT32
1173	HE Cyl2 Total load (BHP) used per end	hecyl2TotalLoadBHP	ReadOnly	FLOAT32
1175	HE Cyl2 Flow (MMscfd) per end	hecyl2FlowMMscfd	ReadOnly	FLOAT32
1177	HE Cyl2 Which Stage of compression this cylinder serves	hecyl2StageNum	ReadOnly	FLOAT32
1179	HE Cyl2 Bore Diameter (in)	hecyl2BoreDiaIn	ReadOnly	FLOAT32
1181	HE Cyl2 Rod Diameter (in)	hecyl2RodDiaIn	ReadOnly	FLOAT32
1183	HE Cyl2 End Active	hecyl2EndActive	ReadOnly	FLOAT32
1185	HE Cyl2 Cylinder Friction (fraction)	hecyl2FrictionFrac	ReadOnly	FLOAT32
1187	HE Cyl2 Cylinder Slippage (fraction)	hecyl2SlippageFrac	ReadOnly	FLOAT32
1189	HE Cyl2 Deactivation Pressure source used	hecyl2DeactPresSrc	ReadOnly	FLOAT32
1191	HE Cyl2 Cylinder MAWP or max allowed pressure (psiG)	hecyl2MAWPPsig	ReadOnly	FLOAT32
1193	HE Cyl2 Suction Valves in Active Compression Mode	hecyl2SucVlvActive	ReadOnly	FLOAT32
1195	HE Cyl2 Discharge Valves in Active Compression Mode	hecyl2DischVlvActive	ReadOnly	FLOAT32
1197	HE Cyl2 Suction Valves in Deactivated End Mode	hecyl2SucVlvDeact	ReadOnly	FLOAT32
1199	HE Cyl2 Discharge Valves in Deactivated End Mode	hecyl2DischVlvDeact	ReadOnly	FLOAT32
1201	HE Cyl2 Throw Number on which this cylinder is located	hecyl2ThrowNum	ReadOnly	FLOAT32
1203	HE Cyl2 Mean Cylinder Internal Pressure (psiG)	hecyl2MeanPresPsig	ReadOnly	FLOAT32
1205	HE Cyl2 Maximum allowed Discharge Temperature (°F)	hecyl2MaxDischTempF	ReadOnly	FLOAT32
1207	HE Cyl2 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl2StrokeLenIn	ReadOnly	FLOAT32
1209	HE Cyl2 Special IPASS's VLVRf-Suction	hecyl2VLVRfSuc	ReadOnly	FLOAT32
1211	HE Cyl2 Special IPASS's VLVRf-Discharge	hecyl2VLVRfDisch	ReadOnly	FLOAT32
1213	HE Cyl3 Suction Pressure into cylinder (psig)	hecyl3SucPresPsig	ReadOnly	FLOAT32
1215	HE Cyl3 Discharge Pressure out of cylinder (psig)	hecyl3DischPresPsig	ReadOnly	FLOAT32
1217	HE Cyl3 Suction temperature of gas into cylinder (°F)	hecyl3SucTempF	ReadOnly	FLOAT32
1219	HE Cyl3 Estimated discharge temperature of cylinder (°F)	hecyl3DischTempF	ReadOnly	FLOAT32
1221	HE Cyl3 Z-Suction Compressibility Factor	hecyl3ZSucCompFact	ReadOnly	FLOAT32
1223	HE Cyl3 Z-Discharge Compressibility Factor	hecyl3ZDischCompFact	ReadOnly	FLOAT32
1225	HE Cyl3 Suction Volumetric Efficiency (%)	hecyl3SucVolEffPct	ReadOnly	FLOAT32
1227	HE Cyl3 Discharge Volumetric Efficiency (%)	hecyl3DischVolEffPct	ReadOnly	FLOAT32

1229	HE Cyl3 Fixed clearance (%) of cylinder end	hecyl3FixClrPct	ReadOnly	FLOAT32
1231	HE Cyl3 Effective clearance (%) of cylinder end	hecyl3EffClrPct	ReadOnly	FLOAT32
1233	HE Cyl3 Isentropic Efficiency (%) per end	hecyl3IsenEffPct	ReadOnly	FLOAT32
1235	HE Cyl3 Adiabatic horsepower (BHP) used to compress gas per end	hecyl3AdiaBHP	ReadOnly	FLOAT32
1237	HE Cyl3 Valve loss (BHP) used to move gas through valves	hecyl3ValveLossBHP	ReadOnly	FLOAT32
1239	HE Cyl3 Parasitic loss (BHP) used when end is deactivated	hecyl3ParasiticLossBHP	ReadOnly	FLOAT32
1241	HE Cyl3 Total load (BHP) used per end	hecyl3TotalLoadBHP	ReadOnly	FLOAT32
1243	HE Cyl3 Flow (MMscfd) per end	hecyl3FlowMMscfd	ReadOnly	FLOAT32
1245	HE Cyl3 Which Stage of compression this cylinder serves	hecyl3StageNum	ReadOnly	FLOAT32
1247	HE Cyl3 Bore Diameter (in)	hecyl3BoreDiaIn	ReadOnly	FLOAT32
1249	HE Cyl3 Rod Diameter (in)	hecyl3RodDiaIn	ReadOnly	FLOAT32
1251	HE Cyl3 End Active	hecyl3EndActive	ReadOnly	FLOAT32
1253	HE Cyl3 Cylinder Friction (fraction)	hecyl3FrictionFrac	ReadOnly	FLOAT32
1255	HE Cyl3 Cylinder Slippage (fraction)	hecyl3SlippageFrac	ReadOnly	FLOAT32
1257	HE Cyl3 Deactivation Pressure source used	hecyl3DeactPresSrc	ReadOnly	FLOAT32
1259	HE Cyl3 Cylinder MAWP or max allowed pressure (psiG)	hecyl3MAWPPsig	ReadOnly	FLOAT32
1261	HE Cyl3 Suction Valves in Active Compression Mode	hecyl3SucVlvActive	ReadOnly	FLOAT32
1263	HE Cyl3 Discharge Valves in Active Compression Mode	hecyl3DischVlvActive	ReadOnly	FLOAT32
1265	HE Cyl3 Suction Valves in Deactivated End Mode	hecyl3SucVlvDeact	ReadOnly	FLOAT32
1267	HE Cyl3 Discharge Valves in Deactivated End Mode	hecyl3DischVlvDeact	ReadOnly	FLOAT32
1269	HE Cyl3 Throw Number on which this cylinder is located	hecyl3ThrowNum	ReadOnly	FLOAT32
1271	HE Cyl3 Mean Cylinder Internal Pressure (psiG)	hecyl3MeanPresPsig	ReadOnly	FLOAT32
1273	HE Cyl3 Maximum allowed Discharge Temperature (°F)	hecyl3MaxDischTempF	ReadOnly	FLOAT32
1275	HE Cyl3 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl3StrokeLenIn	ReadOnly	FLOAT32
1277	HE Cyl3 Special IPASS's VLVRf-Suction	hecyl3VLVRfSuc	ReadOnly	FLOAT32
1279	HE Cyl3 Special IPASS's VLVRf-Discharge	hecyl3VLVRfDisch	ReadOnly	FLOAT32
1281	HE Cyl4 Suction Pressure into cylinder (psig)	hecyl4SucPresPsig	ReadOnly	FLOAT32
1283	HE Cyl4 Discharge Pressure out of cylinder (psig)	hecyl4DischPresPsig	ReadOnly	FLOAT32
1285	HE Cyl4 Suction temperature of gas into cylinder (°F)	hecyl4SucTempF	ReadOnly	FLOAT32
1287	HE Cyl4 Estimated discharge temperature of cylinder (°F)	hecyl4DischTempF	ReadOnly	FLOAT32
1289	HE Cyl4 Z-Suction Compressibility Factor	hecyl4ZSucCompFact	ReadOnly	FLOAT32
1291	HE Cyl4 Z-Discharge Compressibility Factor	hecyl4ZDischCompFact	ReadOnly	FLOAT32
1293	HE Cyl4 Suction Volumetric Efficiency (%)	hecyl4SucVolEffPct	ReadOnly	FLOAT32
1295	HE Cyl4 Discharge Volumetric Efficiency (%)	hecyl4DischVolEffPct	ReadOnly	FLOAT32
1297	HE Cyl4 Fixed clearance (%) of cylinder end	hecyl4FixClrPct	ReadOnly	FLOAT32

1299	HE Cyl4 Effective clearance (%) of cylinder end	hecyl4EffClrPct	ReadOnly	FLOAT32
1301	HE Cyl4 Isentropic Efficiency (%) per end	hecyl4IsenEffPct	ReadOnly	FLOAT32
1303	HE Cyl4 Adiabatic horsepower (BHP) used to compress gas per end	hecyl4AdiaBHP	ReadOnly	FLOAT32
1305	HE Cyl4 Valve loss (BHP) used to move gas through valves	hecyl4ValveLossBHP	ReadOnly	FLOAT32
1307	HE Cyl4 Parasitic loss (BHP) used when end is deactivated	hecyl4ParasiticLossBHP	ReadOnly	FLOAT32
1309	HE Cyl4 Total load (BHP) used per end	hecyl4TotalLoadBHP	ReadOnly	FLOAT32
1311	HE Cyl4 Flow (MMscfd) per end	hecyl4FlowMMscfd	ReadOnly	FLOAT32
1313	HE Cyl4 Which Stage of compression this cylinder serves	hecyl4StageNum	ReadOnly	FLOAT32
1315	HE Cyl4 Bore Diameter (in)	hecyl4BoreDiaIn	ReadOnly	FLOAT32
1317	HE Cyl4 Rod Diameter (in)	hecyl4RodDiaIn	ReadOnly	FLOAT32
1319	HE Cyl4 End Active	hecyl4EndActive	ReadOnly	FLOAT32
1321	HE Cyl4 Cylinder Friction (fraction)	hecyl4FrictionFrac	ReadOnly	FLOAT32
1323	HE Cyl4 Cylinder Slippage (fraction)	hecyl4SlippageFrac	ReadOnly	FLOAT32
1325	HE Cyl4 Deactivation Pressure source used	hecyl4DeactPresSrc	ReadOnly	FLOAT32
1327	HE Cyl4 Cylinder MAWP or max allowed pressure (psiG)	hecyl4MAWPPsig	ReadOnly	FLOAT32
1329	HE Cyl4 Suction Valves in Active Compression Mode	hecyl4SucVlvActive	ReadOnly	FLOAT32
1331	HE Cyl4 Discharge Valves in Active Compression Mode	hecyl4DischVlvActive	ReadOnly	FLOAT32
1333	HE Cyl4 Suction Valves in Deactivated End Mode	hecyl4SucVlvDeact	ReadOnly	FLOAT32
1335	HE Cyl4 Discharge Valves in Deactivated End Mode	hecyl4DischVlvDeact	ReadOnly	FLOAT32
1337	HE Cyl4 Throw Number on which this cylinder is located	hecyl4ThrowNum	ReadOnly	FLOAT32
1339	HE Cyl4 Mean Cylinder Internal Pressure (psiG)	hecyl4MeanPresPsig	ReadOnly	FLOAT32
1341	HE Cyl4 Maximum allowed Discharge Temperature (°F)	hecyl4MaxDischTempF	ReadOnly	FLOAT32
1343	HE Cyl4 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl4StrokeLenIn	ReadOnly	FLOAT32
1345	HE Cyl4 Special IPASS's VLVRf-Suction	hecyl4VLVRfSuc	ReadOnly	FLOAT32
1347	HE Cyl4 Special IPASS's VLVRf-Discharge	hecyl4VLVRfDisch	ReadOnly	FLOAT32
1349	HE Cyl5 Suction Pressure into cylinder (psig)	hecyl5SucPresPsig	ReadOnly	FLOAT32
1351	HE Cyl5 Discharge Pressure out of cylinder (psig)	hecyl5DischPresPsig	ReadOnly	FLOAT32
1353	HE Cyl5 Suction temperature of gas into cylinder (°F)	hecyl5SucTempF	ReadOnly	FLOAT32
1355	HE Cyl5 Estimated discharge temperature of cylinder (°F)	hecyl5DischTempF	ReadOnly	FLOAT32
1357	HE Cyl5 Z-Suction Compressibility Factor	hecyl5ZSucCompFact	ReadOnly	FLOAT32
1359	HE Cyl5 Z-Discharge Compressibility Factor	hecyl5ZDischCompFact	ReadOnly	FLOAT32
1361	HE Cyl5 Suction Volumetric Efficiency (%)	hecyl5SucVolEffPct	ReadOnly	FLOAT32
1363	HE Cyl5 Discharge Volumetric Efficiency (%)	hecyl5DischVolEffPct	ReadOnly	FLOAT32
1365	HE Cyl5 Fixed clearance (%) of cylinder end	hecyl5FixClrPct	ReadOnly	FLOAT32
1367	HE Cyl5 Effective clearance (%) of cylinder end	hecyl5EffClrPct	ReadOnly	FLOAT32

1369	HE Cyl5 Isentropic Efficiency (%) per end	hecyl5IsenEffPct	ReadOnly	FLOAT32
1371	HE Cyl5 Adiabatic horsepower (BHP) used to compress gas per end	hecyl5AdiaBHP	ReadOnly	FLOAT32
1373	HE Cyl5 Valve loss (BHP) used to move gas through valves	hecyl5ValveLossBHP	ReadOnly	FLOAT32
1375	HE Cyl5 Parasitic loss (BHP) used when end is deactivated	hecyl5ParasiticLossBHP	ReadOnly	FLOAT32
1377	HE Cyl5 Total load (BHP) used per end	hecyl5TotalLoadBHP	ReadOnly	FLOAT32
1379	HE Cyl5 Flow (MMscfd) per end	hecyl5FlowMMscfd	ReadOnly	FLOAT32
1381	HE Cyl5 Which Stage of compression this cylinder serves	hecyl5StageNum	ReadOnly	FLOAT32
1383	HE Cyl5 Bore Diameter (in)	hecyl5BoreDiaIn	ReadOnly	FLOAT32
1385	HE Cyl5 Rod Diameter (in)	hecyl5RodDiaIn	ReadOnly	FLOAT32
1387	HE Cyl5 End Active	hecyl5EndActive	ReadOnly	FLOAT32
1389	HE Cyl5 Cylinder Friction (fraction)	hecyl5FrictionFrac	ReadOnly	FLOAT32
1391	HE Cyl5 Cylinder Slippage (fraction)	hecyl5SlippageFrac	ReadOnly	FLOAT32
1393	HE Cyl5 Deactivation Pressure source used	hecyl5DeactPresSrc	ReadOnly	FLOAT32
1395	HE Cyl5 Cylinder MAWP or max allowed pressure (psiG)	hecyl5MAWPPsig	ReadOnly	FLOAT32
1397	HE Cyl5 Suction Valves in Active Compression Mode	hecyl5SucVlvActive	ReadOnly	FLOAT32
1399	HE Cyl5 Discharge Valves in Active Compression Mode	hecyl5DischVlvActive	ReadOnly	FLOAT32
1401	HE Cyl5 Suction Valves in Deactivated End Mode	hecyl5SucVlvDeact	ReadOnly	FLOAT32
1403	HE Cyl5 Discharge Valves in Deactivated End Mode	hecyl5DischVlvDeact	ReadOnly	FLOAT32
1405	HE Cyl5 Throw Number on which this cylinder is located	hecyl5ThrowNum	ReadOnly	FLOAT32
1407	HE Cyl5 Mean Cylinder Internal Pressure (psiG)	hecyl5MeanPresPsig	ReadOnly	FLOAT32
1409	HE Cyl5 Maximum allowed Discharge Temperature (°F)	hecyl5MaxDischTempF	ReadOnly	FLOAT32
1411	HE Cyl5 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl5StrokeLenIn	ReadOnly	FLOAT32
1413	HE Cyl5 Special IPASS's VLVRf-Suction	hecyl5VLVRfSuc	ReadOnly	FLOAT32
1415	HE Cyl5 Special IPASS's VLVRf-Discharge	hecyl5VLVRfDisch	ReadOnly	FLOAT32
1417	HE Cyl6 Suction Pressure into cylinder (psig)	hecyl6SucPresPsig	ReadOnly	FLOAT32
1419	HE Cyl6 Discharge Pressure out of cylinder (psig)	hecyl6DischPresPsig	ReadOnly	FLOAT32
1421	HE Cyl6 Suction temperature of gas into cylinder (°F)	hecyl6SucTempF	ReadOnly	FLOAT32
1423	HE Cyl6 Estimated discharge temperature of cylinder (°F)	hecyl6DischTempF	ReadOnly	FLOAT32
1425	HE Cyl6 Z-Suction Compressibility Factor	hecyl6ZSucCompFact	ReadOnly	FLOAT32
1427	HE Cyl6 Z-Discharge Compressibility Factor	hecyl6ZDischCompFact	ReadOnly	FLOAT32
1429	HE Cyl6 Suction Volumetric Efficiency (%)	hecyl6SucVolEffPct	ReadOnly	FLOAT32
1431	HE Cyl6 Discharge Volumetric Efficiency (%)	hecyl6DischVolEffPct	ReadOnly	FLOAT32
1433	HE Cyl6 Fixed clearance (%) of cylinder end	hecyl6FixClrPct	ReadOnly	FLOAT32
1435	HE Cyl6 Effective clearance (%) of cylinder end	hecyl6EffClrPct	ReadOnly	FLOAT32
1437	HE Cyl6 Isentropic Efficiency (%) per end	hecyl6IsenEffPct	ReadOnly	FLOAT32

1439	HE Cyl6 Adiabatic horsepower (BHP) used to compress gas per end	hecyl6AdiaBHP	ReadOnly	FLOAT32
1441	HE Cyl6 Valve loss (BHP) used to move gas through valves	hecyl6ValveLossBHP	ReadOnly	FLOAT32
1443	HE Cyl6 Parasitic loss (BHP) used when end is deactivated	hecyl6ParasiticLossBHP	ReadOnly	FLOAT32
1445	HE Cyl6 Total load (BHP) used per end	hecyl6TotalLoadBHP	ReadOnly	FLOAT32
1447	HE Cyl6 Flow (MMscfd) per end	hecyl6FlowMMscfd	ReadOnly	FLOAT32
1449	HE Cyl6 Which Stage of compression this cylinder serves	hecyl6StageNum	ReadOnly	FLOAT32
1451	HE Cyl6 Bore Diameter (in)	hecyl6BoreDiaIn	ReadOnly	FLOAT32
1453	HE Cyl6 Rod Diameter (in)	hecyl6RodDiaIn	ReadOnly	FLOAT32
1455	HE Cyl6 End Active	hecyl6EndActive	ReadOnly	FLOAT32
1457	HE Cyl6 Cylinder Friction (fraction)	hecyl6FrictionFrac	ReadOnly	FLOAT32
1459	HE Cyl6 Cylinder Slippage (fraction)	hecyl6SlippageFrac	ReadOnly	FLOAT32
1461	HE Cyl6 Deactivation Pressure source used	hecyl6DeactPresSrc	ReadOnly	FLOAT32
1463	HE Cyl6 Cylinder MAWP or max allowed pressure (psiG)	hecyl6MAWPPsig	ReadOnly	FLOAT32
1465	HE Cyl6 Suction Valves in Active Compression Mode	hecyl6SucVlvActive	ReadOnly	FLOAT32
1467	HE Cyl6 Discharge Valves in Active Compression Mode	hecyl6DischVlvActive	ReadOnly	FLOAT32
1469	HE Cyl6 Suction Valves in Deactivated End Mode	hecyl6SucVlvDeact	ReadOnly	FLOAT32
1471	HE Cyl6 Discharge Valves in Deactivated End Mode	hecyl6DischVlvDeact	ReadOnly	FLOAT32
1473	HE Cyl6 Throw Number on which this cylinder is located	hecyl6ThrowNum	ReadOnly	FLOAT32
1475	HE Cyl6 Mean Cylinder Internal Pressure (psiG)	hecyl6MeanPresPsig	ReadOnly	FLOAT32
1477	HE Cyl6 Maximum allowed Discharge Temperature (°F)	hecyl6MaxDischTempF	ReadOnly	FLOAT32
1479	HE Cyl6 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl6StrokeLenIn	ReadOnly	FLOAT32
1481	HE Cyl6 Special IPASS's VLVRf-Suction	hecyl6VLVRfSuc	ReadOnly	FLOAT32
1483	HE Cyl6 Special IPASS's VLVRf-Discharge	hecyl6VLVRfDisch	ReadOnly	FLOAT32
1485	HE Cyl7 Suction Pressure into cylinder (psig)	hecyl7SucPresPsig	ReadOnly	FLOAT32
1487	HE Cyl7 Discharge Pressure out of cylinder (psig)	hecyl7DischPresPsig	ReadOnly	FLOAT32
1489	HE Cyl7 Suction temperature of gas into cylinder (°F)	hecyl7SucTempF	ReadOnly	FLOAT32
1491	HE Cyl7 Estimated discharge temperature of cylinder (°F)	hecyl7DischTempF	ReadOnly	FLOAT32
1493	HE Cyl7 Z-Suction Compressibility Factor	hecyl7ZSucCompFact	ReadOnly	FLOAT32
1495	HE Cyl7 Z-Discharge Compressibility Factor	hecyl7ZDischCompFact	ReadOnly	FLOAT32
1497	HE Cyl7 Suction Volumetric Efficiency (%)	hecyl7SucVolEffPct	ReadOnly	FLOAT32
1499	HE Cyl7 Discharge Volumetric Efficiency (%)	hecyl7DischVolEffPct	ReadOnly	FLOAT32
1501	HE Cyl7 Fixed clearance (%) of cylinder end	hecyl7FixClrPct	ReadOnly	FLOAT32
1503	HE Cyl7 Effective clearance (%) of cylinder end	hecyl7EffClrPct	ReadOnly	FLOAT32
1505	HE Cyl7 Isentropic Efficiency (%) per end	hecyl7IsenEffPct	ReadOnly	FLOAT32
1507	HE Cyl7 Adiabatic horsepower (BHP) used to compress gas per end	hecyl7AdiaBHP	ReadOnly	FLOAT32

1509	HE Cyl7 Valve loss (BHP) used to move gas through valves	hecyl7ValveLossBHP	ReadOnly	FLOAT32
1511	HE Cyl7 Parasitic loss (BHP) used when end is deactivated	hecyl7ParasiticLossBHP	ReadOnly	FLOAT32
1513	HE Cyl7 Total load (BHP) used per end	hecyl7TotalLoadBHP	ReadOnly	FLOAT32
1515	HE Cyl7 Flow (MMscfd) per end	hecyl7FlowMMscfd	ReadOnly	FLOAT32
1517	HE Cyl7 Which Stage of compression this cylinder serves	hecyl7StageNum	ReadOnly	FLOAT32
1519	HE Cyl7 Bore Diameter (in)	hecyl7BoreDiaIn	ReadOnly	FLOAT32
1521	HE Cyl7 Rod Diameter (in)	hecyl7RodDiaIn	ReadOnly	FLOAT32
1523	HE Cyl7 End Active	hecyl7EndActive	ReadOnly	FLOAT32
1525	HE Cyl7 Cylinder Friction (fraction)	hecyl7FrictionFrac	ReadOnly	FLOAT32
1527	HE Cyl7 Cylinder Slippage (fraction)	hecyl7SlippageFrac	ReadOnly	FLOAT32
1529	HE Cyl7 Deactivation Pressure source used	hecyl7DeactPresSrc	ReadOnly	FLOAT32
1531	HE Cyl7 Cylinder MAWP or max allowed pressure (psiG)	hecyl7MAWPPsig	ReadOnly	FLOAT32
1533	HE Cyl7 Suction Valves in Active Compression Mode	hecyl7SucVlvActive	ReadOnly	FLOAT32
1535	HE Cyl7 Discharge Valves in Active Compression Mode	hecyl7DischVlvActive	ReadOnly	FLOAT32
1537	HE Cyl7 Suction Valves in Deactivated End Mode	hecyl7SucVlvDeact	ReadOnly	FLOAT32
1539	HE Cyl7 Discharge Valves in Deactivated End Mode	hecyl7DischVlvDeact	ReadOnly	FLOAT32
1541	HE Cyl7 Throw Number on which this cylinder is located	hecyl7ThrowNum	ReadOnly	FLOAT32
1543	HE Cyl7 Mean Cylinder Internal Pressure (psiG)	hecyl7MeanPresPsig	ReadOnly	FLOAT32
1545	HE Cyl7 Maximum allowed Discharge Temperature (°F)	hecyl7MaxDischTempF	ReadOnly	FLOAT32
1547	HE Cyl7 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl7StrokeLenIn	ReadOnly	FLOAT32
1549	HE Cyl7 Special IPASS's VLVRf-Suction	hecyl7VLVRfSuc	ReadOnly	FLOAT32
1551	HE Cyl7 Special IPASS's VLVRf-Discharge	hecyl7VLVRfDisch	ReadOnly	FLOAT32
1553	HE Cyl8 Suction Pressure into cylinder (psig)	hecyl8SucPresPsig	ReadOnly	FLOAT32
1555	HE Cyl8 Discharge Pressure out of cylinder (psig)	hecyl8DischPresPsig	ReadOnly	FLOAT32
1557	HE Cyl8 Suction temperature of gas into cylinder (°F)	hecyl8SucTempF	ReadOnly	FLOAT32
1559	HE Cyl8 Estimated discharge temperature of cylinder (°F)	hecyl8DischTempF	ReadOnly	FLOAT32
1561	HE Cyl8 Z-Suction Compressibility Factor	hecyl8ZSucCompFact	ReadOnly	FLOAT32
1563	HE Cyl8 Z-Discharge Compressibility Factor	hecyl8ZDischCompFact	ReadOnly	FLOAT32
1565	HE Cyl8 Suction Volumetric Efficiency (%)	hecyl8SucVolEffPct	ReadOnly	FLOAT32
1567	HE Cyl8 Discharge Volumetric Efficiency (%)	hecyl8DischVolEffPct	ReadOnly	FLOAT32
1569	HE Cyl8 Fixed clearance (%) of cylinder end	hecyl8FixClrPct	ReadOnly	FLOAT32
1571	HE Cyl8 Effective clearance (%) of cylinder end	hecyl8EffClrPct	ReadOnly	FLOAT32
1573	HE Cyl8 Isentropic Efficiency (%) per end	hecyl8IsenEffPct	ReadOnly	FLOAT32
1575	HE Cyl8 Adiabatic horsepower (BHP) used to compress gas per end	hecyl8AdiaBHP	ReadOnly	FLOAT32
1577	HE Cyl8 Valve loss (BHP) used to move gas through valves	hecyl8ValveLossBHP	ReadOnly	FLOAT32

1579	HE Cyl8 Parasitic loss (BHP) used when end is deactivated	hecyl8ParasiticLossBHP	ReadOnly	FLOAT32
1581	HE Cyl8 Total load (BHP) used per end	hecyl8TotalLoadBHP	ReadOnly	FLOAT32
1583	HE Cyl8 Flow (MMscfd) per end	hecyl8FlowMMscfd	ReadOnly	FLOAT32
1585	HE Cyl8 Which Stage of compression this cylinder serves	hecyl8StageNum	ReadOnly	FLOAT32
1587	HE Cyl8 Bore Diameter (in)	hecyl8BoreDiaIn	ReadOnly	FLOAT32
1589	HE Cyl8 Rod Diameter (in)	hecyl8RodDiaIn	ReadOnly	FLOAT32
1591	HE Cyl8 End Active	hecyl8EndActive	ReadOnly	FLOAT32
1593	HE Cyl8 Cylinder Friction (fraction)	hecyl8FrictionFrac	ReadOnly	FLOAT32
1595	HE Cyl8 Cylinder Slippage (fraction)	hecyl8SlippageFrac	ReadOnly	FLOAT32
1597	HE Cyl8 Deactivation Pressure source used	hecyl8DeactPresSrc	ReadOnly	FLOAT32
1599	HE Cyl8 Cylinder MAWP or max allowed pressure (psiG)	hecyl8MAWPPsig	ReadOnly	FLOAT32
1601	HE Cyl8 Suction Valves in Active Compression Mode	hecyl8SucVlvActive	ReadOnly	FLOAT32
1603	HE Cyl8 Discharge Valves in Active Compression Mode	hecyl8DischVlvActive	ReadOnly	FLOAT32
1605	HE Cyl8 Suction Valves in Deactivated End Mode	hecyl8SucVlvDeact	ReadOnly	FLOAT32
1607	HE Cyl8 Discharge Valves in Deactivated End Mode	hecyl8DischVlvDeact	ReadOnly	FLOAT32
1609	HE Cyl8 Throw Number on which this cylinder is located	hecyl8ThrowNum	ReadOnly	FLOAT32
1611	HE Cyl8 Mean Cylinder Internal Pressure (psiG)	hecyl8MeanPresPsig	ReadOnly	FLOAT32
1613	HE Cyl8 Maximum allowed Discharge Temperature (°F)	hecyl8MaxDischTempF	ReadOnly	FLOAT32
1615	HE Cyl8 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl8StrokeLenIn	ReadOnly	FLOAT32
1617	HE Cyl8 Special IPASS's VLVRf-Suction	hecyl8VLVRfSuc	ReadOnly	FLOAT32
1619	HE Cyl8 Special IPASS's VLVRf-Discharge	hecyl8VLVRfDisch	ReadOnly	FLOAT32
1621	HE Cyl9 Suction Pressure into cylinder (psig)	hecyl9SucPresPsig	ReadOnly	FLOAT32
1623	HE Cyl9 Discharge Pressure out of cylinder (psig)	hecyl9DischPresPsig	ReadOnly	FLOAT32
1625	HE Cyl9 Suction temperature of gas into cylinder (°F)	hecyl9SucTempF	ReadOnly	FLOAT32
1627	HE Cyl9 Estimated discharge temperature of cylinder (°F)	hecyl9DischTempF	ReadOnly	FLOAT32
1629	HE Cyl9 Z-Suction Compressibility Factor	hecyl9ZSucCompFact	ReadOnly	FLOAT32
1631	HE Cyl9 Z-Discharge Compressibility Factor	hecyl9ZDischCompFact	ReadOnly	FLOAT32
1633	HE Cyl9 Suction Volumetric Efficiency (%)	hecyl9SucVolEffPct	ReadOnly	FLOAT32
1635	HE Cyl9 Discharge Volumetric Efficiency (%)	hecyl9DischVolEffPct	ReadOnly	FLOAT32
1637	HE Cyl9 Fixed clearance (%) of cylinder end	hecyl9FixClrPct	ReadOnly	FLOAT32
1639	HE Cyl9 Effective clearance (%) of cylinder end	hecyl9EffClrPct	ReadOnly	FLOAT32
1641	HE Cyl9 Isentropic Efficiency (%) per end	hecyl9IsenEffPct	ReadOnly	FLOAT32
1643	HE Cyl9 Adiabatic horsepower (BHP) used to compress gas per end	hecyl9AdiaBHP	ReadOnly	FLOAT32
1645	HE Cyl9 Valve loss (BHP) used to move gas through valves	hecyl9ValveLossBHP	ReadOnly	FLOAT32
1647	HE Cyl9 Parasitic loss (BHP) used when end is deactivated	hecyl9ParasiticLossBHP	ReadOnly	FLOAT32

1649	HE Cyl9 Total load (BHP) used per end	hecyl9TotalLoadBHP	ReadOnly	FLOAT32
1651	HE Cyl9 Flow (MMscfd) per end	hecyl9FlowMMscfd	ReadOnly	FLOAT32
1653	HE Cyl9 Which Stage of compression this cylinder serves	hecyl9StageNum	ReadOnly	FLOAT32
1655	HE Cyl9 Bore Diameter (in)	hecyl9BoreDiaIn	ReadOnly	FLOAT32
1657	HE Cyl9 Rod Diameter (in)	hecyl9RodDiaIn	ReadOnly	FLOAT32
1659	HE Cyl9 End Active	hecyl9EndActive	ReadOnly	FLOAT32
1661	HE Cyl9 Cylinder Friction (fraction)	hecyl9FrictionFrac	ReadOnly	FLOAT32
1663	HE Cyl9 Cylinder Slippage (fraction)	hecyl9SlippageFrac	ReadOnly	FLOAT32
1665	HE Cyl9 Deactivation Pressure source used	hecyl9DeactPresSrc	ReadOnly	FLOAT32
1667	HE Cyl9 Cylinder MAWP or max allowed pressure (psiG)	hecyl9MAWPPsig	ReadOnly	FLOAT32
1669	HE Cyl9 Suction Valves in Active Compression Mode	hecyl9SucVlvActive	ReadOnly	FLOAT32
1671	HE Cyl9 Discharge Valves in Active Compression Mode	hecyl9DischVlvActive	ReadOnly	FLOAT32
1673	HE Cyl9 Suction Valves in Deactivated End Mode	hecyl9SucVlvDeact	ReadOnly	FLOAT32
1675	HE Cyl9 Discharge Valves in Deactivated End Mode	hecyl9DischVlvDeact	ReadOnly	FLOAT32
1677	HE Cyl9 Throw Number on which this cylinder is located	hecyl9ThrowNum	ReadOnly	FLOAT32
1679	HE Cyl9 Mean Cylinder Internal Pressure (psiG)	hecyl9MeanPresPsig	ReadOnly	FLOAT32
1681	HE Cyl9 Maximum allowed Discharge Temperature (°F)	hecyl9MaxDischTempF	ReadOnly	FLOAT32
1683	HE Cyl9 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl9StrokeLenIn	ReadOnly	FLOAT32
1685	HE Cyl9 Special IPASS's VLVRf-Suction	hecyl9VLVRfSuc	ReadOnly	FLOAT32
1687	HE Cyl9 Special IPASS's VLVRf-Discharge	hecyl9VLVRfDisch	ReadOnly	FLOAT32
1689	HE Cyl10 Suction Pressure into cylinder (psig)	hecyl10SucPresPsig	ReadOnly	FLOAT32
1691	HE Cyl10 Discharge Pressure out of cylinder (psig)	hecyl10DischPresPsig	ReadOnly	FLOAT32
1693	HE Cyl10 Suction temperature of gas into cylinder (°F)	hecyl10SucTempF	ReadOnly	FLOAT32
1695	HE Cyl10 Estimated discharge temperature of cylinder (°F)	hecyl10DischTempF	ReadOnly	FLOAT32
1697	HE Cyl10 Z-Suction Compressibility Factor	hecyl10ZSucCompFact	ReadOnly	FLOAT32
1699	HE Cyl10 Z-Discharge Compressibility Factor	hecyl10ZDischCompFact	ReadOnly	FLOAT32
1701	HE Cyl10 Suction Volumetric Efficiency (%)	hecyl10SucVolEffPct	ReadOnly	FLOAT32
1703	HE Cyl10 Discharge Volumetric Efficiency (%)	hecyl10DischVolEffPct	ReadOnly	FLOAT32
1705	HE Cyl10 Fixed clearance (%) of cylinder end	hecyl10FixClrPct	ReadOnly	FLOAT32
1707	HE Cyl10 Effective clearance (%) of cylinder end	hecyl10EffClrPct	ReadOnly	FLOAT32
1709	HE Cyl10 Isentropic Efficiency (%) per end	hecyl10IsenEffPct	ReadOnly	FLOAT32
1711	HE Cyl10 Adiabatic horsepower (BHP) used to compress gas per end	hecyl10AdiaBHP	ReadOnly	FLOAT32
1713	HE Cyl10 Valve loss (BHP) used to move gas through valves	hecyl10ValveLossBHP	ReadOnly	FLOAT32
1715	HE Cyl10 Parasitic loss (BHP) used when end is deactivated	hecyl10ParasiticLossBHP	ReadOnly	FLOAT32
1717	HE Cyl10 Total load (BHP) used per end	hecyl10TotalLoadBHP	ReadOnly	FLOAT32

1719	HE Cyl10 Flow (MMscfd) per end	hecyl10FlowMMscfd	ReadOnly	FLOAT32
1721	HE Cyl10 Which Stage of compression this cylinder serves	hecyl10StageNum	ReadOnly	FLOAT32
1723	HE Cyl10 Bore Diameter (in)	hecyl10BoreDiaIn	ReadOnly	FLOAT32
1725	HE Cyl10 Rod Diameter (in)	hecyl10RodDiaIn	ReadOnly	FLOAT32
1727	HE Cyl10 End Active	hecyl10EndActive	ReadOnly	FLOAT32
1729	HE Cyl10 Cylinder Friction (fraction)	hecyl10FrictionFrac	ReadOnly	FLOAT32
1731	HE Cyl10 Cylinder Slippage (fraction)	hecyl10SlippageFrac	ReadOnly	FLOAT32
1733	HE Cyl10 Deactivation Pressure source used	hecyl10DeactPresSrc	ReadOnly	FLOAT32
1735	HE Cyl10 Cylinder MAWP or max allowed pressure (psiG)	hecyl10MAWPPsig	ReadOnly	FLOAT32
1737	HE Cyl10 Suction Valves in Active Compression Mode	hecyl10SucVlvActive	ReadOnly	FLOAT32
1739	HE Cyl10 Discharge Valves in Active Compression Mode	hecyl10DischVlvActive	ReadOnly	FLOAT32
1741	HE Cyl10 Suction Valves in Deactivated End Mode	hecyl10SucVlvDeact	ReadOnly	FLOAT32
1743	HE Cyl10 Discharge Valves in Deactivated End Mode	hecyl10DischVlvDeact	ReadOnly	FLOAT32
1745	HE Cyl10 Throw Number on which this cylinder is located	hecyl10ThrowNum	ReadOnly	FLOAT32
1747	HE Cyl10 Mean Cylinder Internal Pressure (psiG)	hecyl10MeanPresPsig	ReadOnly	FLOAT32
1749	HE Cyl10 Maximum allowed Discharge Temperature (°F)	hecyl10MaxDischTempF	ReadOnly	FLOAT32
1751	HE Cyl10 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl10StrokeLenIn	ReadOnly	FLOAT32
1753	HE Cyl10 Special IPASS's VLVRf-Suction	hecyl10VLVRfSuc	ReadOnly	FLOAT32
1755	HE Cyl10 Special IPASS's VLVRf-Discharge	hecyl10VLVRfDisch	ReadOnly	FLOAT32
1757	HE Cyl11 Suction Pressure into cylinder (psig)	hecyl11SucPresPsig	ReadOnly	FLOAT32
1759	HE Cyl11 Discharge Pressure out of cylinder (psig)	hecyl11DischPresPsig	ReadOnly	FLOAT32
1761	HE Cyl11 Suction temperature of gas into cylinder (°F)	hecyl11SucTempF	ReadOnly	FLOAT32
1763	HE Cyl11 Estimated discharge temperature of cylinder (°F)	hecyl11DischTempF	ReadOnly	FLOAT32
1765	HE Cyl11 Z-Suction Compressibility Factor	hecyl11ZSucCompFact	ReadOnly	FLOAT32
1767	HE Cyl11 Z-Discharge Compressibility Factor	hecyl11ZDischCompFact	ReadOnly	FLOAT32
1769	HE Cyl11 Suction Volumetric Efficiency (%)	hecyl11SucVolEffPct	ReadOnly	FLOAT32
1771	HE Cyl11 Discharge Volumetric Efficiency (%)	hecyl11DischVolEffPct	ReadOnly	FLOAT32
1773	HE Cyl11 Fixed clearance (%) of cylinder end	hecyl11FixClrPct	ReadOnly	FLOAT32
1775	HE Cyl11 Effective clearance (%) of cylinder end	hecyl11EffClrPct	ReadOnly	FLOAT32
1777	HE Cyl11 Isentropic Efficiency (%) per end	hecyl11IsenEffPct	ReadOnly	FLOAT32
1779	HE Cyl11 Adiabatic horsepower (BHP) used to compress gas per end	hecyl11AdiaBHP	ReadOnly	FLOAT32
1781	HE Cyl11 Valve loss (BHP) used to move gas through valves	hecyl11ValveLossBHP	ReadOnly	FLOAT32
1783	HE Cyl11 Parasitic loss (BHP) used when end is deactivated	hecyl11ParasiticLossBHP	ReadOnly	FLOAT32
1785	HE Cyl11 Total load (BHP) used per end	hecyl11TotalLoadBHP	ReadOnly	FLOAT32
1787	HE Cyl11 Flow (MMscfd) per end	hecyl11FlowMMscfd	ReadOnly	FLOAT32

1789	HE Cyl11 Which Stage of compression this cylinder serves	hecyl11StageNum	ReadOnly	FLOAT32
1791	HE Cyl11 Bore Diameter (in)	hecyl11BoreDiaIn	ReadOnly	FLOAT32
1793	HE Cyl11 Rod Diameter (in)	hecyl11RodDiaIn	ReadOnly	FLOAT32
1795	HE Cyl11 End Active	hecyl11EndActive	ReadOnly	FLOAT32
1797	HE Cyl11 Cylinder Friction (fraction)	hecyl11FrictionFrac	ReadOnly	FLOAT32
1799	HE Cyl11 Cylinder Slippage (fraction)	hecyl11SlippageFrac	ReadOnly	FLOAT32
1801	HE Cyl11 Deactivation Pressure source used	hecyl11DeactPresSrc	ReadOnly	FLOAT32
1803	HE Cyl11 Cylinder MAWP or max allowed pressure (psiG)	hecyl11MAWPPsig	ReadOnly	FLOAT32
1805	HE Cyl11 Suction Valves in Active Compression Mode	hecyl11SucVlvActive	ReadOnly	FLOAT32
1807	HE Cyl11 Discharge Valves in Active Compression Mode	hecyl11DischVlvActive	ReadOnly	FLOAT32
1809	HE Cyl11 Suction Valves in Deactivated End Mode	hecyl11SucVlvDeact	ReadOnly	FLOAT32
1811	HE Cyl11 Discharge Valves in Deactivated End Mode	hecyl11DischVlvDeact	ReadOnly	FLOAT32
1813	HE Cyl11 Throw Number on which this cylinder is located	hecyl11ThrowNum	ReadOnly	FLOAT32
1815	HE Cyl11 Mean Cylinder Internal Pressure (psiG)	hecyl11MeanPresPsig	ReadOnly	FLOAT32
1817	HE Cyl11 Maximum allowed Discharge Temperature (°F)	hecyl11MaxDischTempF	ReadOnly	FLOAT32
1819	HE Cyl11 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl11StrokeLenIn	ReadOnly	FLOAT32
1821	HE Cyl11 Special IPASS's VLVRf-Suction	hecyl11VLVRfSuc	ReadOnly	FLOAT32
1823	HE Cyl11 Special IPASS's VLVRf-Discharge	hecyl11VLVRfDisch	ReadOnly	FLOAT32
1825	HE Cyl12 Suction Pressure into cylinder (psig)	hecyl12SucPresPsig	ReadOnly	FLOAT32
1827	HE Cyl12 Discharge Pressure out of cylinder (psig)	hecyl12DischPresPsig	ReadOnly	FLOAT32
1829	HE Cyl12 Suction temperature of gas into cylinder (°F)	hecyl12SucTempF	ReadOnly	FLOAT32
1831	HE Cyl12 Estimated discharge temperature of cylinder (°F)	hecyl12DischTempF	ReadOnly	FLOAT32
1833	HE Cyl12 Z-Suction Compressibility Factor	hecyl12ZSucCompFact	ReadOnly	FLOAT32
1835	HE Cyl12 Z-Discharge Compressibility Factor	hecyl12ZDischCompFact	ReadOnly	FLOAT32
1837	HE Cyl12 Suction Volumetric Efficiency (%)	hecyl12SucVolEffPct	ReadOnly	FLOAT32
1839	HE Cyl12 Discharge Volumetric Efficiency (%)	hecyl12DischVolEffPct	ReadOnly	FLOAT32
1841	HE Cyl12 Fixed clearance (%) of cylinder end	hecyl12FixClrPct	ReadOnly	FLOAT32
1843	HE Cyl12 Effective clearance (%) of cylinder end	hecyl12EffClrPct	ReadOnly	FLOAT32
1845	HE Cyl12 Isentropic Efficiency (%) per end	hecyl12IsenEffPct	ReadOnly	FLOAT32
1847	HE Cyl12 Adiabatic horsepower (BHP) used to compress gas per end	hecyl12AdiaBHP	ReadOnly	FLOAT32
1849	HE Cyl12 Valve loss (BHP) used to move gas through valves	hecyl12ValveLossBHP	ReadOnly	FLOAT32
1851	HE Cyl12 Parasitic loss (BHP) used when end is deactivated	hecyl12ParasiticLossBHP	ReadOnly	FLOAT32
1853	HE Cyl12 Total load (BHP) used per end	hecyl12TotalLoadBHP	ReadOnly	FLOAT32
1855	HE Cyl12 Flow (MMscfd) per end	hecyl12FlowMMscfd	ReadOnly	FLOAT32

1857	HE Cyl12 Which Stage of compression this cylinder serves	hecyl12StageNum	ReadOnly	FLOAT32
1859	HE Cyl12 Bore Diameter (in)	hecyl12BoreDiaIn	ReadOnly	FLOAT32
1861	HE Cyl12 Rod Diameter (in)	hecyl12RodDiaIn	ReadOnly	FLOAT32
1863	HE Cyl12 End Active	hecyl12EndActive	ReadOnly	FLOAT32
1865	HE Cyl12 Cylinder Friction (fraction)	hecyl12FrictionFrac	ReadOnly	FLOAT32
1867	HE Cyl12 Cylinder Slippage (fraction)	hecyl12SlippageFrac	ReadOnly	FLOAT32
1869	HE Cyl12 Deactivation Pressure source used	hecyl12DeactPresSrc	ReadOnly	FLOAT32
1871	HE Cyl12 Cylinder MAWP or max allowed pressure (psiG)	hecyl12MAWPPsig	ReadOnly	FLOAT32
1873	HE Cyl12 Suction Valves in Active Compression Mode	hecyl12SucVlvActive	ReadOnly	FLOAT32
1875	HE Cyl12 Discharge Valves in Active Compression Mode	hecyl12DischVlvActive	ReadOnly	FLOAT32
1877	HE Cyl12 Suction Valves in Deactivated End Mode	hecyl12SucVlvDeact	ReadOnly	FLOAT32
1879	HE Cyl12 Discharge Valves in Deactivated End Mode	hecyl12DischVlvDeact	ReadOnly	FLOAT32
1881	HE Cyl12 Throw Number on which this cylinder is located	hecyl12ThrowNum	ReadOnly	FLOAT32
1883	HE Cyl12 Mean Cylinder Internal Pressure (psiG)	hecyl12MeanPresPsig	ReadOnly	FLOAT32
1885	HE Cyl12 Maximum allowed Discharge Temperature (°F)	hecyl12MaxDischTempF	ReadOnly	FLOAT32
1887	HE Cyl12 Length of the Stroke for the VVCP on this cylinder end (in)	hecyl12StrokeLenIn	ReadOnly	FLOAT32
1889	HE Cyl12 Special IPASS's VLVRf-Suction	hecyl12VLVRfSuc	ReadOnly	FLOAT32
1891	HE Cyl12 Special IPASS's VLVRf-Discharge	hecyl12VLVRfDisch	ReadOnly	FLOAT32
1893	CE Cyl1 Suction Pressure into cylinder (psig)	cecyl1SucPresPsig	ReadOnly	FLOAT32
1895	CE Cyl1 Discharge Pressure out of cylinder (psig)	cecyl1DischPresPsig	ReadOnly	FLOAT32
1897	CE Cyl1 Suction temperature of gas into cylinder (°F)	cecyl1SucTempF	ReadOnly	FLOAT32
1899	CE Cyl1 Estimated discharge temperature of cylinder (°F)	cecyl1DischTempF	ReadOnly	FLOAT32
1901	CE Cyl1 Z-Suction Compressibility Factor	cecyl1ZSucCompFact	ReadOnly	FLOAT32
1903	CE Cyl1 Z-Discharge Compressibility Factor	cecyl1ZDischCompFact	ReadOnly	FLOAT32
1905	CE Cyl1 Suction Volumetric Efficiency (%)	cecyl1SucVolEffPct	ReadOnly	FLOAT32
1907	CE Cyl1 Discharge Volumetric Efficiency (%)	cecyl1DischVolEffPct	ReadOnly	FLOAT32
1909	CE Cyl1 Fixed clearance (%) of cylinder end	cecyl1FixClrPct	ReadOnly	FLOAT32
1911	CE Cyl1 Effective clearance (%) of cylinder end	cecyl1EffClrPct	ReadOnly	FLOAT32
1913	CE Cyl1 Isentropic Efficiency (%) per end	cecyl1IsenEffPct	ReadOnly	FLOAT32
1915	CE Cyl1 Adiabatic horsepower (BHP) used to compress gas per end	cecyl1AdiaBHP	ReadOnly	FLOAT32
1917	CE Cyl1 Valve loss (BHP) used to move gas through valves	cecyl1ValveLossBHP	ReadOnly	FLOAT32
1919	CE Cyl1 Parasitic loss (BHP) used when end is deactivated	cecyl1ParasiticLossBHP	ReadOnly	FLOAT32
1921	CE Cyl1 Total load (BHP) used per end	cecyl1TotalLoadBHP	ReadOnly	FLOAT32
1923	CE Cyl1 Flow (MMscfd) per end	cecyl1FlowMMscfd	ReadOnly	FLOAT32

1925	CE Cyl1 Which Stage of compression this cylinder serves	cecyl1StageNum	ReadOnly	FLOAT32
1927	CE Cyl1 Bore Diameter (in)	cecyl1BoreDiaIn	ReadOnly	FLOAT32
1929	CE Cyl1 Rod Diameter (in)	cecyl1RodDiaIn	ReadOnly	FLOAT32
1931	CE Cyl1 End Active	cecyl1EndActive	ReadOnly	FLOAT32
1933	CE Cyl1 Cylinder Friction (fraction)	cecyl1FrictionFrac	ReadOnly	FLOAT32
1935	CE Cyl1 Cylinder Slippage (fraction)	cecyl1SlippageFrac	ReadOnly	FLOAT32
1937	CE Cyl1 Deactivation Pressure source used	cecyl1DeactPresSrc	ReadOnly	FLOAT32
1939	CE Cyl1 Cylinder MAWP or max allowed pressure (psiG)	cecyl1MAWPPsig	ReadOnly	FLOAT32
1941	CE Cyl1 Suction Valves in Active Compression Mode	cecyl1SucVlvActive	ReadOnly	FLOAT32
1943	CE Cyl1 Discharge Valves in Active Compression Mode	cecyl1DischVlvActive	ReadOnly	FLOAT32
1945	CE Cyl1 Suction Valves in Deactivated End Mode	cecyl1SucVlvDeact	ReadOnly	FLOAT32
1947	CE Cyl1 Discharge Valves in Deactivated End Mode	cecyl1DischVlvDeact	ReadOnly	FLOAT32
1949	CE Cyl1 Throw Number on which this cylinder is located	cecyl1ThrowNum	ReadOnly	FLOAT32
1951	CE Cyl1 Mean Cylinder Internal Pressure (psiG)	cecyl1MeanPresPsig	ReadOnly	FLOAT32
1953	CE Cyl1 Maximum allowed Discharge Temperature (°F)	cecyl1MaxDischTempF	ReadOnly	FLOAT32
1955	CE Cyl1 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl1StrokeLenIn	ReadOnly	FLOAT32
1957	CE Cyl1 Special IPASS's VLVRf-Suction	cecyl1VLVRfSuc	ReadOnly	FLOAT32
1959	CE Cyl1 Special IPASS's VLVRf-Discharge	cecyl1VLVRfDisch	ReadOnly	FLOAT32
1961	CE Cyl2 Suction Pressure into cylinder (psig)	cecyl2SucPresPsig	ReadOnly	FLOAT32
1963	CE Cyl2 Discharge Pressure out of cylinder (psig)	cecyl2DischPresPsig	ReadOnly	FLOAT32
1965	CE Cyl2 Suction temperature of gas into cylinder (°F)	cecyl2SucTempF	ReadOnly	FLOAT32
1967	CE Cyl2 Estimated discharge temperature of cylinder (°F)	cecyl2DischTempF	ReadOnly	FLOAT32
1969	CE Cyl2 Z-Suction Compressibility Factor	cecyl2ZSucCompFact	ReadOnly	FLOAT32
1971	CE Cyl2 Z-Discharge Compressibility Factor	cecyl2ZDischCompFact	ReadOnly	FLOAT32
1973	CE Cyl2 Suction Volumetric Efficiency (%)	cecyl2SucVolEffPct	ReadOnly	FLOAT32
1975	CE Cyl2 Discharge Volumetric Efficiency (%)	cecyl2DischVolEffPct	ReadOnly	FLOAT32
1977	CE Cyl2 Fixed clearance (%) of cylinder end	cecyl2FixClrPct	ReadOnly	FLOAT32
1979	CE Cyl2 Effective clearance (%) of cylinder end	cecyl2EffClrPct	ReadOnly	FLOAT32
1981	CE Cyl2 Isentropic Efficiency (%) per end	cecyl2IsenEffPct	ReadOnly	FLOAT32
1983	CE Cyl2 Adiabatic horsepower (BHP) used to compress gas per end	cecyl2AdiaBHP	ReadOnly	FLOAT32
1985	CE Cyl2 Valve loss (BHP) used to move gas through valves	cecyl2ValveLossBHP	ReadOnly	FLOAT32
1987	CE Cyl2 Parasitic loss (BHP) used when end is deactivated	cecyl2ParasiticLossBHP	ReadOnly	FLOAT32
1989	CE Cyl2 Total load (BHP) used per end	cecyl2TotalLoadBHP	ReadOnly	FLOAT32
1991	CE Cyl2 Flow (MMscfd) per end	cecyl2FlowMMscfd	ReadOnly	FLOAT32
1993	CE Cyl2 Which Stage of compression this cylinder serves	cecyl2StageNum	ReadOnly	FLOAT32

1995	CE Cyl2 Bore Diameter (in)	cecyl2BoreDiaIn	ReadOnly	FLOAT32
1997	CE Cyl2 Rod Diameter (in)	cecyl2RodDiaIn	ReadOnly	FLOAT32
1999	CE Cyl2 End Active	cecyl2EndActive	ReadOnly	FLOAT32
2001	CE Cyl2 Cylinder Friction (fraction)	cecyl2FrictionFrac	ReadOnly	FLOAT32
2003	CE Cyl2 Cylinder Slippage (fraction)	cecyl2SlippageFrac	ReadOnly	FLOAT32
2005	CE Cyl2 Deactivation Pressure source used	cecyl2DeactPresSrc	ReadOnly	FLOAT32
2007	CE Cyl2 Cylinder MAWP or max allowed pressure (psiG)	cecyl2MAWPPsig	ReadOnly	FLOAT32
2009	CE Cyl2 Suction Valves in Active Compression Mode	cecyl2SucVlvActive	ReadOnly	FLOAT32
2011	CE Cyl2 Discharge Valves in Active Compression Mode	cecyl2DischVlvActive	ReadOnly	FLOAT32
2013	CE Cyl2 Suction Valves in Deactivated End Mode	cecyl2SucVlvDeact	ReadOnly	FLOAT32
2015	CE Cyl2 Discharge Valves in Deactivated End Mode	cecyl2DischVlvDeact	ReadOnly	FLOAT32
2017	CE Cyl2 Throw Number on which this cylinder is located	cecyl2ThrowNum	ReadOnly	FLOAT32
2019	CE Cyl2 Mean Cylinder Internal Pressure (psiG)	cecyl2MeanPresPsig	ReadOnly	FLOAT32
2021	CE Cyl2 Maximum allowed Discharge Temperature (°F)	cecyl2MaxDischTempF	ReadOnly	FLOAT32
2023	CE Cyl2 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl2StrokeLenIn	ReadOnly	FLOAT32
2025	CE Cyl2 Special IPASS's VLVRf-Suction	cecyl2VLVRfSuc	ReadOnly	FLOAT32
2027	CE Cyl2 Special IPASS's VLVRf-Discharge	cecyl2VLVRfDisch	ReadOnly	FLOAT32
2029	CE Cyl3 Suction Pressure into cylinder (psig)	cecyl3SucPresPsig	ReadOnly	FLOAT32
2031	CE Cyl3 Discharge Pressure out of cylinder (psig)	cecyl3DischPresPsig	ReadOnly	FLOAT32
2033	CE Cyl3 Suction temperature of gas into cylinder (°F)	cecyl3SucTempF	ReadOnly	FLOAT32
2035	CE Cyl3 Estimated discharge temperature of cylinder (°F)	cecyl3DischTempF	ReadOnly	FLOAT32
2037	CE Cyl3 Z-Suction Compressibility Factor	cecyl3ZSucCompFact	ReadOnly	FLOAT32
2039	CE Cyl3 Z-Discharge Compressibility Factor	cecyl3ZDischCompFact	ReadOnly	FLOAT32
2041	CE Cyl3 Suction Volumetric Efficiency (%)	cecyl3SucVolEffPct	ReadOnly	FLOAT32
2043	CE Cyl3 Discharge Volumetric Efficiency (%)	cecyl3DischVolEffPct	ReadOnly	FLOAT32
2045	CE Cyl3 Fixed clearance (%) of cylinder end	cecyl3FixClrPct	ReadOnly	FLOAT32
2047	CE Cyl3 Effective clearance (%) of cylinder end	cecyl3EffClrPct	ReadOnly	FLOAT32
2049	CE Cyl3 Isentropic Efficiency (%) per end	cecyl3IsenEffPct	ReadOnly	FLOAT32
2051	CE Cyl3 Adiabatic horsepower (BHP) used to compress gas per end	cecyl3AdiaBHP	ReadOnly	FLOAT32
2053	CE Cyl3 Valve loss (BHP) used to move gas through valves	cecyl3ValveLossBHP	ReadOnly	FLOAT32
2055	CE Cyl3 Parasitic loss (BHP) used when end is deactivated	cecyl3ParasiticLossBHP	ReadOnly	FLOAT32
2057	CE Cyl3 Total load (BHP) used per end	cecyl3TotalLoadBHP	ReadOnly	FLOAT32
2059	CE Cyl3 Flow (MMscfd) per end	cecyl3FlowMMscfd	ReadOnly	FLOAT32
2061	CE Cyl3 Which Stage of compression this cylinder serves	cecyl3StageNum	ReadOnly	FLOAT32
2063	CE Cyl3 Bore Diameter (in)	cecyl3BoreDiaIn	ReadOnly	FLOAT32

2065	CE Cyl3 Rod Diameter (in)	cecyl3RodDiaIn	ReadOnly	FLOAT32
2067	CE Cyl3 End Active	cecyl3EndActive	ReadOnly	FLOAT32
2069	CE Cyl3 Cylinder Friction (fraction)	cecyl3FrictionFrac	ReadOnly	FLOAT32
2071	CE Cyl3 Cylinder Slippage (fraction)	cecyl3SlippageFrac	ReadOnly	FLOAT32
2073	CE Cyl3 Deactivation Pressure source used	cecyl3DeactPresSrc	ReadOnly	FLOAT32
2075	CE Cyl3 Cylinder MAWP or max allowed pressure (psiG)	cecyl3MAWPPsig	ReadOnly	FLOAT32
2077	CE Cyl3 Suction Valves in Active Compression Mode	cecyl3SucVlvActive	ReadOnly	FLOAT32
2079	CE Cyl3 Discharge Valves in Active Compression Mode	cecyl3DischVlvActive	ReadOnly	FLOAT32
2081	CE Cyl3 Suction Valves in Deactivated End Mode	cecyl3SucVlvDeact	ReadOnly	FLOAT32
2083	CE Cyl3 Discharge Valves in Deactivated End Mode	cecyl3DischVlvDeact	ReadOnly	FLOAT32
2085	CE Cyl3 Throw Number on which this cylinder is located	cecyl3ThrowNum	ReadOnly	FLOAT32
2087	CE Cyl3 Mean Cylinder Internal Pressure (psiG)	cecyl3MeanPresPsig	ReadOnly	FLOAT32
2089	CE Cyl3 Maximum allowed Discharge Temperature (°F)	cecyl3MaxDischTempF	ReadOnly	FLOAT32
2091	CE Cyl3 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl3StrokeLenIn	ReadOnly	FLOAT32
2093	CE Cyl3 Special IPASS's VLVRf-Suction	cecyl3VLVRfSuc	ReadOnly	FLOAT32
2095	CE Cyl3 Special IPASS's VLVRf-Discharge	cecyl3VLVRfDisch	ReadOnly	FLOAT32
2097	CE Cyl4 Suction Pressure into cylinder (psig)	cecyl4SucPresPsig	ReadOnly	FLOAT32
2099	CE Cyl4 Discharge Pressure out of cylinder (psig)	cecyl4DischPresPsig	ReadOnly	FLOAT32
2101	CE Cyl4 Suction temperature of gas into cylinder (°F)	cecyl4SucTempF	ReadOnly	FLOAT32
2103	CE Cyl4 Estimated discharge temperature of cylinder (°F)	cecyl4DischTempF	ReadOnly	FLOAT32
2105	CE Cyl4 Z-Suction Compressibility Factor	cecyl4ZSucCompFact	ReadOnly	FLOAT32
2107	CE Cyl4 Z-Discharge Compressibility Factor	cecyl4ZDischCompFact	ReadOnly	FLOAT32
2109	CE Cyl4 Suction Volumetric Efficiency (%)	cecyl4SucVolEffPct	ReadOnly	FLOAT32
2111	CE Cyl4 Discharge Volumetric Efficiency (%)	cecyl4DischVolEffPct	ReadOnly	FLOAT32
2113	CE Cyl4 Fixed clearance (%) of cylinder end	cecyl4FixClrPct	ReadOnly	FLOAT32
2115	CE Cyl4 Effective clearance (%) of cylinder end	cecyl4EffClrPct	ReadOnly	FLOAT32
2117	CE Cyl4 Isentropic Efficiency (%) per end	cecyl4IsenEffPct	ReadOnly	FLOAT32
2119	CE Cyl4 Adiabatic horsepower (BHP) used to compress gas per end	cecyl4AdiaBHP	ReadOnly	FLOAT32
2121	CE Cyl4 Valve loss (BHP) used to move gas through valves	cecyl4ValveLossBHP	ReadOnly	FLOAT32
2123	CE Cyl4 Parasitic loss (BHP) used when end is deactivated	cecyl4ParasiticLossBHP	ReadOnly	FLOAT32
2125	CE Cyl4 Total load (BHP) used per end	cecyl4TotalLoadBHP	ReadOnly	FLOAT32
2127	CE Cyl4 Flow (MMscfd) per end	cecyl4FlowMMscfd	ReadOnly	FLOAT32
2129	CE Cyl4 Which Stage of compression this cylinder serves	cecyl4StageNum	ReadOnly	FLOAT32
2131	CE Cyl4 Bore Diameter (in)	cecyl4BoreDiaIn	ReadOnly	FLOAT32
2133	CE Cyl4 Rod Diameter (in)	cecyl4RodDiaIn	ReadOnly	FLOAT32

2135	CE Cyl4 End Active	cecyl4EndActive	ReadOnly	FLOAT32
2137	CE Cyl4 Cylinder Friction (fraction)	cecyl4FrictionFrac	ReadOnly	FLOAT32
2139	CE Cyl4 Cylinder Slippage (fraction)	cecyl4SlippageFrac	ReadOnly	FLOAT32
2141	CE Cyl4 Deactivation Pressure source used	cecyl4DeactPresSrc	ReadOnly	FLOAT32
2143	CE Cyl4 Cylinder MAWP or max allowed pressure (psiG)	cecyl4MAWPPsig	ReadOnly	FLOAT32
2145	CE Cyl4 Suction Valves in Active Compression Mode	cecyl4SucVlvActive	ReadOnly	FLOAT32
2147	CE Cyl4 Discharge Valves in Active Compression Mode	cecyl4DischVlvActive	ReadOnly	FLOAT32
2149	CE Cyl4 Suction Valves in Deactivated End Mode	cecyl4SucVlvDeact	ReadOnly	FLOAT32
2151	CE Cyl4 Discharge Valves in Deactivated End Mode	cecyl4DischVlvDeact	ReadOnly	FLOAT32
2153	CE Cyl4 Throw Number on which this cylinder is located	cecyl4ThrowNum	ReadOnly	FLOAT32
2155	CE Cyl4 Mean Cylinder Internal Pressure (psiG)	cecyl4MeanPresPsig	ReadOnly	FLOAT32
2157	CE Cyl4 Maximum allowed Discharge Temperature (°F)	cecyl4MaxDischTempF	ReadOnly	FLOAT32
2159	CE Cyl4 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl4StrokeLenIn	ReadOnly	FLOAT32
2161	CE Cyl4 Special IPASS's VLVRf-Suction	cecyl4VLVRfSuc	ReadOnly	FLOAT32
2163	CE Cyl4 Special IPASS's VLVRf-Discharge	cecyl4VLVRfDisch	ReadOnly	FLOAT32
2165	CE Cyl5 Suction Pressure into cylinder (psig)	cecyl5SucPresPsig	ReadOnly	FLOAT32
2167	CE Cyl5 Discharge Pressure out of cylinder (psig)	cecyl5DischPresPsig	ReadOnly	FLOAT32
2169	CE Cyl5 Suction temperature of gas into cylinder (°F)	cecyl5SucTempF	ReadOnly	FLOAT32
2171	CE Cyl5 Estimated discharge temperature of cylinder (°F)	cecyl5DischTempF	ReadOnly	FLOAT32
2173	CE Cyl5 Z-Suction Compressibility Factor	cecyl5ZSucCompFact	ReadOnly	FLOAT32
2175	CE Cyl5 Z-Discharge Compressibility Factor	cecyl5ZDischCompFact	ReadOnly	FLOAT32
2177	CE Cyl5 Suction Volumetric Efficiency (%)	cecyl5SucVolEffPct	ReadOnly	FLOAT32
2179	CE Cyl5 Discharge Volumetric Efficiency (%)	cecyl5DischVolEffPct	ReadOnly	FLOAT32
2181	CE Cyl5 Fixed clearance (%) of cylinder end	cecyl5FixClrPct	ReadOnly	FLOAT32
2183	CE Cyl5 Effective clearance (%) of cylinder end	cecyl5EffClrPct	ReadOnly	FLOAT32
2185	CE Cyl5 Isentropic Efficiency (%) per end	cecyl5IsenEffPct	ReadOnly	FLOAT32
2187	CE Cyl5 Adiabatic horsepower (BHP) used to compress gas per end	cecyl5AdiaBHP	ReadOnly	FLOAT32
2189	CE Cyl5 Valve loss (BHP) used to move gas through valves	cecyl5ValveLossBHP	ReadOnly	FLOAT32
2191	CE Cyl5 Parasitic loss (BHP) used when end is deactivated	cecyl5ParasiticLossBHP	ReadOnly	FLOAT32
2193	CE Cyl5 Total load (BHP) used per end	cecyl5TotalLoadBHP	ReadOnly	FLOAT32
2195	CE Cyl5 Flow (MMscfd) per end	cecyl5FlowMMscfd	ReadOnly	FLOAT32
2197	CE Cyl5 Which Stage of compression this cylinder serves	cecyl5StageNum	ReadOnly	FLOAT32
2199	CE Cyl5 Bore Diameter (in)	cecyl5BoreDiaIn	ReadOnly	FLOAT32
2201	CE Cyl5 Rod Diameter (in)	cecyl5RodDiaIn	ReadOnly	FLOAT32
2203	CE Cyl5 End Active	cecyl5EndActive	ReadOnly	FLOAT32

2205	CE Cyl5 Cylinder Friction (fraction)	cecyl5FrictionFrac	ReadOnly	FLOAT32
2207	CE Cyl5 Cylinder Slippage (fraction)	cecyl5SlippageFrac	ReadOnly	FLOAT32
2209	CE Cyl5 Deactivation Pressure source used	cecyl5DeactPresSrc	ReadOnly	FLOAT32
2211	CE Cyl5 Cylinder MAWP or max allowed pressure (psiG)	cecyl5MAWPPsig	ReadOnly	FLOAT32
2213	CE Cyl5 Suction Valves in Active Compression Mode	cecyl5SucVlvActive	ReadOnly	FLOAT32
2215	CE Cyl5 Discharge Valves in Active Compression Mode	cecyl5DischVlvActive	ReadOnly	FLOAT32
2217	CE Cyl5 Suction Valves in Deactivated End Mode	cecyl5SucVlvDeact	ReadOnly	FLOAT32
2219	CE Cyl5 Discharge Valves in Deactivated End Mode	cecyl5DischVlvDeact	ReadOnly	FLOAT32
2221	CE Cyl5 Throw Number on which this cylinder is located	cecyl5ThrowNum	ReadOnly	FLOAT32
2223	CE Cyl5 Mean Cylinder Internal Pressure (psiG)	cecyl5MeanPresPsig	ReadOnly	FLOAT32
2225	CE Cyl5 Maximum allowed Discharge Temperature (°F)	cecyl5MaxDischTempF	ReadOnly	FLOAT32
2227	CE Cyl5 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl5StrokeLenIn	ReadOnly	FLOAT32
2229	CE Cyl5 Special IPASS's VLVRf-Suction	cecyl5VLVRfSuc	ReadOnly	FLOAT32
2231	CE Cyl5 Special IPASS's VLVRf-Discharge	cecyl5VLVRfDisch	ReadOnly	FLOAT32
2233	CE Cyl6 Suction Pressure into cylinder (psig)	cecyl6SucPresPsig	ReadOnly	FLOAT32
2235	CE Cyl6 Discharge Pressure out of cylinder (psig)	cecyl6DischPresPsig	ReadOnly	FLOAT32
2237	CE Cyl6 Suction temperature of gas into cylinder (°F)	cecyl6SucTempF	ReadOnly	FLOAT32
2239	CE Cyl6 Estimated discharge temperature of cylinder (°F)	cecyl6DischTempF	ReadOnly	FLOAT32
2241	CE Cyl6 Z-Suction Compressibility Factor	cecyl6ZSucCompFact	ReadOnly	FLOAT32
2243	CE Cyl6 Z-Discharge Compressibility Factor	cecyl6ZDischCompFact	ReadOnly	FLOAT32
2245	CE Cyl6 Suction Volumetric Efficiency (%)	cecyl6SucVolEffPct	ReadOnly	FLOAT32
2247	CE Cyl6 Discharge Volumetric Efficiency (%)	cecyl6DischVolEffPct	ReadOnly	FLOAT32
2249	CE Cyl6 Fixed clearance (%) of cylinder end	cecyl6FixClrPct	ReadOnly	FLOAT32
2251	CE Cyl6 Effective clearance (%) of cylinder end	cecyl6EffClrPct	ReadOnly	FLOAT32
2253	CE Cyl6 Isentropic Efficiency (%) per end	cecyl6IsenEffPct	ReadOnly	FLOAT32
2255	CE Cyl6 Adiabatic horsepower (BHP) used to compress gas per end	cecyl6AdiaBHP	ReadOnly	FLOAT32
2257	CE Cyl6 Valve loss (BHP) used to move gas through valves	cecyl6ValveLossBHP	ReadOnly	FLOAT32
2259	CE Cyl6 Parasitic loss (BHP) used when end is deactivated	cecyl6ParasiticLossBHP	ReadOnly	FLOAT32
2261	CE Cyl6 Total load (BHP) used per end	cecyl6TotalLoadBHP	ReadOnly	FLOAT32
2263	CE Cyl6 Flow (MMscfd) per end	cecyl6FlowMMscfd	ReadOnly	FLOAT32
2265	CE Cyl6 Which Stage of compression this cylinder serves	cecyl6StageNum	ReadOnly	FLOAT32
2267	CE Cyl6 Bore Diameter (in)	cecyl6BoreDiaIn	ReadOnly	FLOAT32
2269	CE Cyl6 Rod Diameter (in)	cecyl6RodDiaIn	ReadOnly	FLOAT32
2271	CE Cyl6 End Active	cecyl6EndActive	ReadOnly	FLOAT32
2273	CE Cyl6 Cylinder Friction (fraction)	cecyl6FrictionFrac	ReadOnly	FLOAT32

2275	CE Cyl6 Cylinder Slippage (fraction)	cecyl6SlippageFrac	ReadOnly	FLOAT32
2277	CE Cyl6 Deactivation Pressure source used	cecyl6DeactPresSrc	ReadOnly	FLOAT32
2279	CE Cyl6 Cylinder MAWP or max allowed pressure (psiG)	cecyl6MAWPPsig	ReadOnly	FLOAT32
2281	CE Cyl6 Suction Valves in Active Compression Mode	cecyl6SucVlvActive	ReadOnly	FLOAT32
2283	CE Cyl6 Discharge Valves in Active Compression Mode	cecyl6DischVlvActive	ReadOnly	FLOAT32
2285	CE Cyl6 Suction Valves in Deactivated End Mode	cecyl6SucVlvDeact	ReadOnly	FLOAT32
2287	CE Cyl6 Discharge Valves in Deactivated End Mode	cecyl6DischVlvDeact	ReadOnly	FLOAT32
2289	CE Cyl6 Throw Number on which this cylinder is located	cecyl6ThrowNum	ReadOnly	FLOAT32
2291	CE Cyl6 Mean Cylinder Internal Pressure (psiG)	cecyl6MeanPresPsig	ReadOnly	FLOAT32
2293	CE Cyl6 Maximum allowed Discharge Temperature (°F)	cecyl6MaxDischTempF	ReadOnly	FLOAT32
2295	CE Cyl6 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl6StrokeLenIn	ReadOnly	FLOAT32
2297	CE Cyl6 Special IPASS's VLVRf-Suction	cecyl6VLVRfSuc	ReadOnly	FLOAT32
2299	CE Cyl6 Special IPASS's VLVRf-Discharge	cecyl6VLVRfDisch	ReadOnly	FLOAT32
2301	CE Cyl7 Suction Pressure into cylinder (psig)	cecyl7SucPresPsig	ReadOnly	FLOAT32
2303	CE Cyl7 Discharge Pressure out of cylinder (psig)	cecyl7DischPresPsig	ReadOnly	FLOAT32
2305	CE Cyl7 Suction temperature of gas into cylinder (°F)	cecyl7SucTempF	ReadOnly	FLOAT32
2307	CE Cyl7 Estimated discharge temperature of cylinder (°F)	cecyl7DischTempF	ReadOnly	FLOAT32
2309	CE Cyl7 Z-Suction Compressibility Factor	cecyl7ZSucCompFact	ReadOnly	FLOAT32
2311	CE Cyl7 Z-Discharge Compressibility Factor	cecyl7ZDischCompFact	ReadOnly	FLOAT32
2313	CE Cyl7 Suction Volumetric Efficiency (%)	cecyl7SucVolEffPct	ReadOnly	FLOAT32
2315	CE Cyl7 Discharge Volumetric Efficiency (%)	cecyl7DischVolEffPct	ReadOnly	FLOAT32
2317	CE Cyl7 Fixed clearance (%) of cylinder end	cecyl7FixClrPct	ReadOnly	FLOAT32
2319	CE Cyl7 Effective clearance (%) of cylinder end	cecyl7EffClrPct	ReadOnly	FLOAT32
2321	CE Cyl7 Isentropic Efficiency (%) per end	cecyl7IsenEffPct	ReadOnly	FLOAT32
2323	CE Cyl7 Adiabatic horsepower (BHP) used to compress gas per end	cecyl7AdiaBHP	ReadOnly	FLOAT32
2325	CE Cyl7 Valve loss (BHP) used to move gas through valves	cecyl7ValveLossBHP	ReadOnly	FLOAT32
2327	CE Cyl7 Parasitic loss (BHP) used when end is deactivated	cecyl7ParasiticLossBHP	ReadOnly	FLOAT32
2329	CE Cyl7 Total load (BHP) used per end	cecyl7TotalLoadBHP	ReadOnly	FLOAT32
2331	CE Cyl7 Flow (MMscfd) per end	cecyl7FlowMMscfd	ReadOnly	FLOAT32
2333	CE Cyl7 Which Stage of compression this cylinder serves	cecyl7StageNum	ReadOnly	FLOAT32
2335	CE Cyl7 Bore Diameter (in)	cecyl7BoreDiaIn	ReadOnly	FLOAT32
2337	CE Cyl7 Rod Diameter (in)	cecyl7RodDiaIn	ReadOnly	FLOAT32
2339	CE Cyl7 End Active	cecyl7EndActive	ReadOnly	FLOAT32
2341	CE Cyl7 Cylinder Friction (fraction)	cecyl7FrictionFrac	ReadOnly	FLOAT32
2343	CE Cyl7 Cylinder Slippage (fraction)	cecyl7SlippageFrac	ReadOnly	FLOAT32

2345	CE Cyl7 Deactivation Pressure source used	cecyl7DeactPresSrc	ReadOnly	FLOAT32
2347	CE Cyl7 Cylinder MAWP or max allowed pressure (psiG)	cecyl7MAWPPsig	ReadOnly	FLOAT32
2349	CE Cyl7 Suction Valves in Active Compression Mode	cecyl7SucVlvActive	ReadOnly	FLOAT32
2351	CE Cyl7 Discharge Valves in Active Compression Mode	cecyl7DischVlvActive	ReadOnly	FLOAT32
2353	CE Cyl7 Suction Valves in Deactivated End Mode	cecyl7SucVlvDeact	ReadOnly	FLOAT32
2355	CE Cyl7 Discharge Valves in Deactivated End Mode	cecyl7DischVlvDeact	ReadOnly	FLOAT32
2357	CE Cyl7 Throw Number on which this cylinder is located	cecyl7ThrowNum	ReadOnly	FLOAT32
2359	CE Cyl7 Mean Cylinder Internal Pressure (psiG)	cecyl7MeanPresPsig	ReadOnly	FLOAT32
2361	CE Cyl7 Maximum allowed Discharge Temperature (°F)	cecyl7MaxDischTempF	ReadOnly	FLOAT32
2363	CE Cyl7 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl7StrokeLenIn	ReadOnly	FLOAT32
2365	CE Cyl7 Special IPASS's VLVRf-Suction	cecyl7VLVRfSuc	ReadOnly	FLOAT32
2367	CE Cyl7 Special IPASS's VLVRf-Discharge	cecyl7VLVRfDisch	ReadOnly	FLOAT32
2369	CE Cyl8 Suction Pressure into cylinder (psig)	cecyl8SucPresPsig	ReadOnly	FLOAT32
2371	CE Cyl8 Discharge Pressure out of cylinder (psig)	cecyl8DischPresPsig	ReadOnly	FLOAT32
2373	CE Cyl8 Suction temperature of gas into cylinder (°F)	cecyl8SucTempF	ReadOnly	FLOAT32
2375	CE Cyl8 Estimated discharge temperature of cylinder (°F)	cecyl8DischTempF	ReadOnly	FLOAT32
2377	CE Cyl8 Z-Suction Compressibility Factor	cecyl8ZSucCompFact	ReadOnly	FLOAT32
2379	CE Cyl8 Z-Discharge Compressibility Factor	cecyl8ZDischCompFact	ReadOnly	FLOAT32
2381	CE Cyl8 Suction Volumetric Efficiency (%)	cecyl8SucVolEffPct	ReadOnly	FLOAT32
2383	CE Cyl8 Discharge Volumetric Efficiency (%)	cecyl8DischVolEffPct	ReadOnly	FLOAT32
2385	CE Cyl8 Fixed clearance (%) of cylinder end	cecyl8FixClrPct	ReadOnly	FLOAT32
2387	CE Cyl8 Effective clearance (%) of cylinder end	cecyl8EffClrPct	ReadOnly	FLOAT32
2389	CE Cyl8 Isentropic Efficiency (%) per end	cecyl8IsenEffPct	ReadOnly	FLOAT32
2391	CE Cyl8 Adiabatic horsepower (BHP) used to compress gas per end	cecyl8AdiaBHP	ReadOnly	FLOAT32
2393	CE Cyl8 Valve loss (BHP) used to move gas through valves	cecyl8ValveLossBHP	ReadOnly	FLOAT32
2395	CE Cyl8 Parasitic loss (BHP) used when end is deactivated	cecyl8ParasiticLossBHP	ReadOnly	FLOAT32
2397	CE Cyl8 Total load (BHP) used per end	cecyl8TotalLoadBHP	ReadOnly	FLOAT32
2399	CE Cyl8 Flow (MMscfd) per end	cecyl8FlowMMscfd	ReadOnly	FLOAT32
2401	CE Cyl8 Which Stage of compression this cylinder serves	cecyl8StageNum	ReadOnly	FLOAT32
2403	CE Cyl8 Bore Diameter (in)	cecyl8BoreDiaIn	ReadOnly	FLOAT32
2405	CE Cyl8 Rod Diameter (in)	cecyl8RodDiaIn	ReadOnly	FLOAT32
2407	CE Cyl8 End Active	cecyl8EndActive	ReadOnly	FLOAT32
2409	CE Cyl8 Cylinder Friction (fraction)	cecyl8FrictionFrac	ReadOnly	FLOAT32
2411	CE Cyl8 Cylinder Slippage (fraction)	cecyl8SlippageFrac	ReadOnly	FLOAT32
2413	CE Cyl8 Deactivation Pressure source used	cecyl8DeactPresSrc	ReadOnly	FLOAT32

2415	CE Cyl8 Cylinder MAWP or max allowed pressure (psiG)	cecyl8MAWPPsig	ReadOnly	FLOAT32
2417	CE Cyl8 Suction Valves in Active Compression Mode	cecyl8SucVlvActive	ReadOnly	FLOAT32
2419	CE Cyl8 Discharge Valves in Active Compression Mode	cecyl8DischVlvActive	ReadOnly	FLOAT32
2421	CE Cyl8 Suction Valves in Deactivated End Mode	cecyl8SucVlvDeact	ReadOnly	FLOAT32
2423	CE Cyl8 Discharge Valves in Deactivated End Mode	cecyl8DischVlvDeact	ReadOnly	FLOAT32
2425	CE Cyl8 Throw Number on which this cylinder is located	cecyl8ThrowNum	ReadOnly	FLOAT32
2427	CE Cyl8 Mean Cylinder Internal Pressure (psiG)	cecyl8MeanPresPsig	ReadOnly	FLOAT32
2429	CE Cyl8 Maximum allowed Discharge Temperature (°F)	cecyl8MaxDischTempF	ReadOnly	FLOAT32
2431	CE Cyl8 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl8StrokeLenIn	ReadOnly	FLOAT32
2433	CE Cyl8 Special IPASS's VLVRf-Suction	cecyl8VLVRfSuc	ReadOnly	FLOAT32
2435	CE Cyl8 Special IPASS's VLVRf-Discharge	cecyl8VLVRfDisch	ReadOnly	FLOAT32
2437	CE Cyl9 Suction Pressure into cylinder (psig)	cecyl9SucPresPsig	ReadOnly	FLOAT32
2439	CE Cyl9 Discharge Pressure out of cylinder (psig)	cecyl9DischPresPsig	ReadOnly	FLOAT32
2441	CE Cyl9 Suction temperature of gas into cylinder (°F)	cecyl9SucTempF	ReadOnly	FLOAT32
2443	CE Cyl9 Estimated discharge temperature of cylinder (°F)	cecyl9DischTempF	ReadOnly	FLOAT32
2445	CE Cyl9 Z-Suction Compressibility Factor	cecyl9ZSucCompFact	ReadOnly	FLOAT32
2447	CE Cyl9 Z-Discharge Compressibility Factor	cecyl9ZDischCompFact	ReadOnly	FLOAT32
2449	CE Cyl9 Suction Volumetric Efficiency (%)	cecyl9SucVolEffPct	ReadOnly	FLOAT32
2451	CE Cyl9 Discharge Volumetric Efficiency (%)	cecyl9DischVolEffPct	ReadOnly	FLOAT32
2453	CE Cyl9 Fixed clearance (%) of cylinder end	cecyl9FixClrPct	ReadOnly	FLOAT32
2455	CE Cyl9 Effective clearance (%) of cylinder end	cecyl9EffClrPct	ReadOnly	FLOAT32
2457	CE Cyl9 Isentropic Efficiency (%) per end	cecyl9IsenEffPct	ReadOnly	FLOAT32
2459	CE Cyl9 Adiabatic horsepower (BHP) used to compress gas per end	cecyl9AdiaBHP	ReadOnly	FLOAT32
2461	CE Cyl9 Valve loss (BHP) used to move gas through valves	cecyl9ValveLossBHP	ReadOnly	FLOAT32
2463	CE Cyl9 Parasitic loss (BHP) used when end is deactivated	cecyl9ParasiticLossBHP	ReadOnly	FLOAT32
2465	CE Cyl9 Total load (BHP) used per end	cecyl9TotalLoadBHP	ReadOnly	FLOAT32
2467	CE Cyl9 Flow (MMscfd) per end	cecyl9FlowMMscfd	ReadOnly	FLOAT32
2469	CE Cyl9 Which Stage of compression this cylinder serves	cecyl9StageNum	ReadOnly	FLOAT32
2471	CE Cyl9 Bore Diameter (in)	cecyl9BoreDiaIn	ReadOnly	FLOAT32
2473	CE Cyl9 Rod Diameter (in)	cecyl9RodDiaIn	ReadOnly	FLOAT32
2475	CE Cyl9 End Active	cecyl9EndActive	ReadOnly	FLOAT32
2477	CE Cyl9 Cylinder Friction (fraction)	cecyl9FrictionFrac	ReadOnly	FLOAT32
2479	CE Cyl9 Cylinder Slippage (fraction)	cecyl9SlippageFrac	ReadOnly	FLOAT32
2481	CE Cyl9 Deactivation Pressure source used	cecyl9DeactPresSrc	ReadOnly	FLOAT32
2483	CE Cyl9 Cylinder MAWP or max allowed pressure (psiG)	cecyl9MAWPPsig	ReadOnly	FLOAT32

2485	CE Cyl9 Suction Valves in Active Compression Mode	cecyl9SucVlvActive	ReadOnly	FLOAT32
2487	CE Cyl9 Discharge Valves in Active Compression Mode	cecyl9DischVlvActive	ReadOnly	FLOAT32
2489	CE Cyl9 Suction Valves in Deactivated End Mode	cecyl9SucVlvDeact	ReadOnly	FLOAT32
2491	CE Cyl9 Discharge Valves in Deactivated End Mode	cecyl9DischVlvDeact	ReadOnly	FLOAT32
2493	CE Cyl9 Throw Number on which this cylinder is located	cecyl9ThrowNum	ReadOnly	FLOAT32
2495	CE Cyl9 Mean Cylinder Internal Pressure (psiG)	cecyl9MeanPresPsig	ReadOnly	FLOAT32
2497	CE Cyl9 Maximum allowed Discharge Temperature (°F)	cecyl9MaxDischTempF	ReadOnly	FLOAT32
2499	CE Cyl9 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl9StrokeLenIn	ReadOnly	FLOAT32
2501	CE Cyl9 Special IPASS's VLVRf-Suction	cecyl9VLVRfSuc	ReadOnly	FLOAT32
2503	CE Cyl9 Special IPASS's VLVRf-Discharge	cecyl9VLVRfDisch	ReadOnly	FLOAT32
2505	CE Cyl10 Suction Pressure into cylinder (psig)	cecyl10SucPresPsig	ReadOnly	FLOAT32
2507	CE Cyl10 Discharge Pressure out of cylinder (psig)	cecyl10DischPresPsig	ReadOnly	FLOAT32
2509	CE Cyl10 Suction temperature of gas into cylinder (°F)	cecyl10SucTempF	ReadOnly	FLOAT32
2511	CE Cyl10 Estimated discharge temperature of cylinder (°F)	cecyl10DischTempF	ReadOnly	FLOAT32
2513	CE Cyl10 Z-Suction Compressibility Factor	cecyl10ZSucCompFact	ReadOnly	FLOAT32
2515	CE Cyl10 Z-Discharge Compressibility Factor	cecyl10ZDischCompFact	ReadOnly	FLOAT32
2517	CE Cyl10 Suction Volumetric Efficiency (%)	cecyl10SucVolEffPct	ReadOnly	FLOAT32
2519	CE Cyl10 Discharge Volumetric Efficiency (%)	cecyl10DischVolEffPct	ReadOnly	FLOAT32
2521	CE Cyl10 Fixed clearance (%) of cylinder end	cecyl10FixClrPct	ReadOnly	FLOAT32
2523	CE Cyl10 Effective clearance (%) of cylinder end	cecyl10EffClrPct	ReadOnly	FLOAT32
2525	CE Cyl10 Isentropic Efficiency (%) per end	cecyl10IsenEffPct	ReadOnly	FLOAT32
2527	CE Cyl10 Adiabatic horsepower (BHP) used to compress gas per end	cecyl10AdiaBHP	ReadOnly	FLOAT32
2529	CE Cyl10 Valve loss (BHP) used to move gas through valves	cecyl10ValveLossBHP	ReadOnly	FLOAT32
2531	CE Cyl10 Parasitic loss (BHP) used when end is deactivated	cecyl10ParasiticLossBHP	ReadOnly	FLOAT32
2533	CE Cyl10 Total load (BHP) used per end	cecyl10TotalLoadBHP	ReadOnly	FLOAT32
2535	CE Cyl10 Flow (MMscfd) per end	cecyl10FlowMMscfd	ReadOnly	FLOAT32
2537	CE Cyl10 Which Stage of compression this cylinder serves	cecyl10StageNum	ReadOnly	FLOAT32
2539	CE Cyl10 Bore Diameter (in)	cecyl10BoreDiaIn	ReadOnly	FLOAT32
2541	CE Cyl10 Rod Diameter (in)	cecyl10RodDiaIn	ReadOnly	FLOAT32
2543	CE Cyl10 End Active	cecyl10EndActive	ReadOnly	FLOAT32
2545	CE Cyl10 Cylinder Friction (fraction)	cecyl10FrictionFrac	ReadOnly	FLOAT32
2547	CE Cyl10 Cylinder Slippage (fraction)	cecyl10SlippageFrac	ReadOnly	FLOAT32
2549	CE Cyl10 Deactivation Pressure source used	cecyl10DeactPresSrc	ReadOnly	FLOAT32
2551	CE Cyl10 Cylinder MAWP or max allowed pressure (psiG)	cecyl10MAWPPsig	ReadOnly	FLOAT32
2553	CE Cyl10 Suction Valves in Active Compression Mode	cecyl10SucVlvActive	ReadOnly	FLOAT32

2555	CE Cyl10 Discharge Valves in Active Compression Mode	cecyl10DischVlvActive	ReadOnly	FLOAT32
2557	CE Cyl10 Suction Valves in Deactivated End Mode	cecyl10SucVlvDeact	ReadOnly	FLOAT32
2559	CE Cyl10 Discharge Valves in Deactivated End Mode	cecyl10DischVlvDeact	ReadOnly	FLOAT32
2561	CE Cyl10 Throw Number on which this cylinder is located	cecyl10ThrowNum	ReadOnly	FLOAT32
2563	CE Cyl10 Mean Cylinder Internal Pressure (psiG)	cecyl10MeanPresPsig	ReadOnly	FLOAT32
2565	CE Cyl10 Maximum allowed Discharge Temperature (°F)	cecyl10MaxDischTempF	ReadOnly	FLOAT32
2567	CE Cyl10 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl10StrokeLenIn	ReadOnly	FLOAT32
2569	CE Cyl10 Special IPASS's VLVRf-Suction	cecyl10VLVRfSuc	ReadOnly	FLOAT32
2571	CE Cyl10 Special IPASS's VLVRf-Discharge	cecyl10VLVRfDisch	ReadOnly	FLOAT32
2573	CE Cyl11 Suction Pressure into cylinder (psig)	cecyl11SucPresPsig	ReadOnly	FLOAT32
2575	CE Cyl11 Discharge Pressure out of cylinder (psig)	cecyl11DischPresPsig	ReadOnly	FLOAT32
2577	CE Cyl11 Suction temperature of gas into cylinder (°F)	cecyl11SucTempF	ReadOnly	FLOAT32
2579	CE Cyl11 Estimated discharge temperature of cylinder (°F)	cecyl11DischTempF	ReadOnly	FLOAT32
2581	CE Cyl11 Z-Suction Compressibility Factor	cecyl11ZSucCompFact	ReadOnly	FLOAT32
2583	CE Cyl11 Z-Discharge Compressibility Factor	cecyl11ZDischCompFact	ReadOnly	FLOAT32
2585	CE Cyl11 Suction Volumetric Efficiency (%)	cecyl11SucVolEffPct	ReadOnly	FLOAT32
2587	CE Cyl11 Discharge Volumetric Efficiency (%)	cecyl11DischVolEffPct	ReadOnly	FLOAT32
2589	CE Cyl11 Fixed clearance (%) of cylinder end	cecyl11FixClrPct	ReadOnly	FLOAT32
2591	CE Cyl11 Effective clearance (%) of cylinder end	cecyl11EffClrPct	ReadOnly	FLOAT32
2593	CE Cyl11 Isentropic Efficiency (%) per end	cecyl11IsenEffPct	ReadOnly	FLOAT32
2595	CE Cyl11 Adiabatic horsepower (BHP) used to compress gas per end	cecyl11AdiaBHP	ReadOnly	FLOAT32
2597	CE Cyl11 Valve loss (BHP) used to move gas through valves	cecyl11ValveLossBHP	ReadOnly	FLOAT32
2599	CE Cyl11 Parasitic loss (BHP) used when end is deactivated	cecyl11ParasiticLossBHP	ReadOnly	FLOAT32
2601	CE Cyl11 Total load (BHP) used per end	cecyl11TotalLoadBHP	ReadOnly	FLOAT32
2603	CE Cyl11 Flow (MMscfd) per end	cecyl11FlowMMscfd	ReadOnly	FLOAT32
2605	CE Cyl11 Which Stage of compression this cylinder serves	cecyl11StageNum	ReadOnly	FLOAT32
2607	CE Cyl11 Bore Diameter (in)	cecyl11BoreDiaIn	ReadOnly	FLOAT32
2609	CE Cyl11 Rod Diameter (in)	cecyl11RodDiaIn	ReadOnly	FLOAT32
2611	CE Cyl11 End Active	cecyl11EndActive	ReadOnly	FLOAT32
2613	CE Cyl11 Cylinder Friction (fraction)	cecyl11FrictionFrac	ReadOnly	FLOAT32
2615	CE Cyl11 Cylinder Slippage (fraction)	cecyl11SlippageFrac	ReadOnly	FLOAT32
2617	CE Cyl11 Deactivation Pressure source used	cecyl11DeactPresSrc	ReadOnly	FLOAT32
2619	CE Cyl11 Cylinder MAWP or max allowed pressure (psiG)	cecyl11MAWPPsig	ReadOnly	FLOAT32
2621	CE Cyl11 Suction Valves in Active Compression Mode	cecyl11SucVlvActive	ReadOnly	FLOAT32

2623	CE Cyl11 Discharge Valves in Active Compression Mode	cecyl11DischVlvActive	ReadOnly	FLOAT32
2625	CE Cyl11 Suction Valves in Deactivated End Mode	cecyl11SucVlvDeact	ReadOnly	FLOAT32
2627	CE Cyl11 Discharge Valves in Deactivated End Mode	cecyl11DischVlvDeact	ReadOnly	FLOAT32
2629	CE Cyl11 Throw Number on which this cylinder is located	cecyl11ThrowNum	ReadOnly	FLOAT32
2631	CE Cyl11 Mean Cylinder Internal Pressure (psiG)	cecyl11MeanPresPsig	ReadOnly	FLOAT32
2633	CE Cyl11 Maximum allowed Discharge Temperature (°F)	cecyl11MaxDischTempF	ReadOnly	FLOAT32
2635	CE Cyl11 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl11StrokeLenIn	ReadOnly	FLOAT32
2637	CE Cyl11 Special IPASS's VLVRf-Suction	cecyl11VLVRfSuc	ReadOnly	FLOAT32
2639	CE Cyl11 Special IPASS's VLVRf-Discharge	cecyl11VLVRfDisch	ReadOnly	FLOAT32
2641	CE Cyl12 Suction Pressure into cylinder (psig)	cecyl12SucPresPsig	ReadOnly	FLOAT32
2643	CE Cyl12 Discharge Pressure out of cylinder (psig)	cecyl12DischPresPsig	ReadOnly	FLOAT32
2645	CE Cyl12 Suction temperature of gas into cylinder (°F)	cecyl12SucTempF	ReadOnly	FLOAT32
2647	CE Cyl12 Estimated discharge temperature of cylinder (°F)	cecyl12DischTempF	ReadOnly	FLOAT32
2649	CE Cyl12 Z-Suction Compressibility Factor	cecyl12ZSucCompFact	ReadOnly	FLOAT32
2651	CE Cyl12 Z-Discharge Compressibility Factor	cecyl12ZDischCompFact	ReadOnly	FLOAT32
2653	CE Cyl12 Suction Volumetric Efficiency (%)	cecyl12SucVolEffPct	ReadOnly	FLOAT32
2655	CE Cyl12 Discharge Volumetric Efficiency (%)	cecyl12DischVolEffPct	ReadOnly	FLOAT32
2657	CE Cyl12 Fixed clearance (%) of cylinder end	cecyl12FixClrPct	ReadOnly	FLOAT32
2659	CE Cyl12 Effective clearance (%) of cylinder end	cecyl12EffClrPct	ReadOnly	FLOAT32
2661	CE Cyl12 Isentropic Efficiency (%) per end	cecyl12IsenEffPct	ReadOnly	FLOAT32
2663	CE Cyl12 Adiabatic horsepower (BHP) used to compress gas per end	cecyl12AdiaBHP	ReadOnly	FLOAT32
2665	CE Cyl12 Valve loss (BHP) used to move gas through valves	cecyl12ValveLossBHP	ReadOnly	FLOAT32
2667	CE Cyl12 Parasitic loss (BHP) used when end is deactivated	cecyl12ParasiticLossBHP	ReadOnly	FLOAT32
2669	CE Cyl12 Total load (BHP) used per end	cecyl12TotalLoadBHP	ReadOnly	FLOAT32
2671	CE Cyl12 Flow (MMscfd) per end	cecyl12FlowMMscfd	ReadOnly	FLOAT32
2673	CE Cyl12 Which Stage of compression this cylinder serves	cecyl12StageNum	ReadOnly	FLOAT32
2675	CE Cyl12 Bore Diameter (in)	cecyl12BoreDiaIn	ReadOnly	FLOAT32
2677	CE Cyl12 Rod Diameter (in)	cecyl12RodDiaIn	ReadOnly	FLOAT32
2679	CE Cyl12 End Active	cecyl12EndActive	ReadOnly	FLOAT32
2681	CE Cyl12 Cylinder Friction (fraction)	cecyl12FrictionFrac	ReadOnly	FLOAT32
2683	CE Cyl12 Cylinder Slippage (fraction)	cecyl12SlippageFrac	ReadOnly	FLOAT32
2685	CE Cyl12 Deactivation Pressure source used	cecyl12DeactPresSrc	ReadOnly	FLOAT32
2687	CE Cyl12 Cylinder MAWP or max allowed pressure (psiG)	cecyl12MAWPPsig	ReadOnly	FLOAT32
2689	CE Cyl12 Suction Valves in Active Compression Mode	cecyl12SucVlvActive	ReadOnly	FLOAT32

2691	CE Cyl12 Discharge Valves in Active Compression Mode	cecyl12DischVlvActive	ReadOnly	FLOAT32
2693	CE Cyl12 Suction Valves in Deactivated End Mode	cecyl12SucVlvDeact	ReadOnly	FLOAT32
2695	CE Cyl12 Discharge Valves in Deactivated End Mode	cecyl12DischVlvDeact	ReadOnly	FLOAT32
2697	CE Cyl12 Throw Number on which this cylinder is located	cecyl12ThrowNum	ReadOnly	FLOAT32
2699	CE Cyl12 Mean Cylinder Internal Pressure (psiG)	cecyl12MeanPresPsig	ReadOnly	FLOAT32
2701	CE Cyl12 Maximum allowed Discharge Temperature (°F)	cecyl12MaxDischTempF	ReadOnly	FLOAT32
2703	CE Cyl12 Length of the Stroke for the VVCP on this cylinder end (in)	cecyl12StrokeLenIn	ReadOnly	FLOAT32
2705	CE Cyl12 Special IPASS's VLVRf-Suction	cecyl12VLVRfSuc	ReadOnly	FLOAT32
2707	CE Cyl12 Special IPASS's VLVRf-Discharge	cecyl12VLVRfDisch	ReadOnly	FLOAT32
2709	cytemp1	cyltemp1	ReadOnly	FLOAT32
2711	cytemp2	cyltemp2	ReadOnly	FLOAT32
2713	cytemp3	cyltemp3	ReadOnly	FLOAT32
2715	cytemp4	cyltemp4	ReadOnly	FLOAT32
2717	cytemp5	cyltemp5	ReadOnly	FLOAT32
2719	cytemp6	cyltemp6	ReadOnly	FLOAT32
2721	cytemp7	cyltemp7	ReadOnly	FLOAT32
2723	cytemp8	cyltemp8	ReadOnly	FLOAT32
2725	cytemp9	cyltemp9	ReadOnly	FLOAT32
2727	cytemp10	cyltemp10	ReadOnly	FLOAT32
2729	cytemp11	cyltemp11	ReadOnly	FLOAT32
2731	cytemp12	cyltemp12	ReadOnly	FLOAT32
2733	cylpress1	cylpress1	ReadOnly	FLOAT32
2735	cylpress2	cylpress2	ReadOnly	FLOAT32
2737	cylpress3	cylpress3	ReadOnly	FLOAT32
2739	cylpress4	cylpress4	ReadOnly	FLOAT32
2741	cylpress5	cylpress5	ReadOnly	FLOAT32
2743	cylpress6	cylpress6	ReadOnly	FLOAT32
2745	cylpress7	cylpress7	ReadOnly	FLOAT32
2747	cylpress8	cylpress8	ReadOnly	FLOAT32
2749	cylpress9	cylpress9	ReadOnly	FLOAT32
2751	cylpress10	cylpress10	ReadOnly	FLOAT32
2753	cylpress11	cylpress11	ReadOnly	FLOAT32
2755	cylpress12	cylpress12	ReadOnly	FLOAT32
2757	Is Licensed	isLicensed	ReadOnly	BOOL
2759	License Type	LicenseType	ReadOnly	FLOAT32
2761	Pin Non Rev Error	PinNonRevError	ReadOnly	UINT32

8.1 Register Descriptions

8.1.1 Register 130

Integer. Returns a value whose bits Bit0..Bit24 identify safety issues near the current operating point as suction and discharge pressures are expanded some. If this value is 0, then low risk of shut down over the next time period. Otherwise, if this value AND'ed with 473536 (aka 0x739C0) is 0 then moderate risk, else high risk of shut down.

8.1.2 Register 145

The value returned will be one of the following codes:

- **0:** No action suggested. All is good.
- **1:** Applies when the current load step is safe but is overloaded (but still less than 105% of max. allowed torque), and a reduction in speed can be used to return unit to not being overloaded.
- **2:** Applies when the current load step is safe but is overloaded (but still less than 105% of max. allowed torque), and a change in suction pressure (decrease or increase) can be used to return unit to not being overloaded.
- **3:** Applies when current load step is unsafe, but there is a safe next step up or a safe next step down.
- **4:** Applies when current load step is unsafe, but changes to speed can be made that will make the current load step safe again.
- **5:** Applies when current load step is unsafe, but there is at least one safe step with more load, or at least one safe load step with less load, but neither of those load steps is close enough (change in unit load is too large for driver to take all at once) to engage. As such, a transitory load step (one with non-critical errors) will be suggested. Unit's current load step to be changed to the provided load step, and then the next call will return the next transitory load step. This continues until the final safe load step is achieved. This option will assume transitory load steps are only used for less than 15 seconds each, and thus the final safe load step much be achieved within eight (8) transitory load step changes (within 120 sec = 2 min).
- **6:** Applies when current load step is unsafe, but changes to the current suction pressure can be made that will make the current load step safe again.
- **7:** Current load step is unsafe, but engaging recycle may be useful if it can increase the suction pressure (or reduce the discharge pressure) to indicated value within the next few minutes.
- **100:** Unit/driver is overloaded (more than 105% of max. allowed torque).
- **1000:** A shut down is required if this value stays at 1000 for longer than the allowed delay time.

8.1.3 Register 147

The ShutDownActionValue register provides the specific target value required to perform the action recommended by the Shutdown Action Suggestion code:

- **Code 0 (No Action):** The value will be 0, as no action is required.
- **Code 1 (Speed Change for Overload):** The value is the target speed (RPM) required to bring the unit out of an overloaded state.
- **Code 2 (Suction Change for Overload):** The value is the target suction pressure required to bring the unit out of an overloaded state.
- **Code 3 (Change Load Step):** The value is the target load step number (either the next safe step up or down) that the unit should be moved to.
- **Code 4 (Speed Change for Unsafe Step):** The value is the target speed (RPM) that will make the current unsafe load step safe again.
- **Code 5 (Use Transitory Load Step):** The value is the next temporary load step number in a sequence needed to reach a distant safe step.
- **Code 6 (Suction Change for Unsafe Step):** The value is the target suction pressure that will make the current unsafe load step safe again.
- **Code 7 (Engage Recycle):** The value is the target suction or discharge pressure that should be achieved by using the recycle system.

- **Code 100 (Severe Overload):** The value confirms the unit is overloaded above 105% of its maximum allowed torque, requiring immediate action.
- **Code 1000 (Shutdown Required):** The value indicates a mandatory shutdown is needed if the critical fault is not cleared within a predefined time limit.

8.1.4 Register 149

Returns a 32-bit Integer identifying all determined issues with the specified load step at the current operating point. Bit Descriptions (0–32):

- **Bit 0 – Discharge Pressure Exceeded:** Triggered if discharge pressures exceed the MAWP (or limit set in eRCM).
- **Bit 1 – Discharge Temperature Exceeded:** Occurs when adiabatic discharge temperatures exceed defined limits.
- **Bit 2 – Gas Rod Loads Exceeded:** Based on gas pressures at the flange.
- **Bit 3 – Net Rod Loads Exceeded:** Based on internal gas pressures and reciprocating weights.
- **Bit 4 – Low Volumetric Efficiency:** Suction Vol. Eff. drops below eRCM-specified limit (typically 30% or 15), OR discharge Vol. Eff. drops below 10%. May lead to cylinder heating and valve degradation, though not typically critical.
- **Bit 5 – Throttling Occurred:** Also known as blow-through.
- **Bit 6 – Z-Factor Out of Range:** Compressibility method not suited for current gas conditions.
- **Bit 7 – Invalid Suction Pressure:** Suction pressure not within defined ranges.
- **Bit 8 – Invalid Discharge Pressure:** Discharge pressure not within defined ranges.
- **Bit 9 – Speed Out of Range:** Speed not within defined ranges.
- **Bit 10 – Failed Rod Reversal:** Forces exceeded limits during rod reversal calculations.
- **Bit 11 – Pin Reversal Exceeded:** Required degrees of reversal not met.
- **Bit 12 – API618 3%-Rule Violated:** Opposing forces do not exceed 3% threshold as per API618.
- **Bit 13 – Non-obtainable Goal:** Triggered when other errors block further calculations (e.g., stage flow balancing).
- **Bit 14 – Blank Off Occurred:** Suction Vol. Eff. drops to 0. May cause heating and valve degradation if sustained.
- **Bit 15 – Liquids May Be Forming:** Detected when using AGA-8 for compressibility predictions.
- **Bit 16 – Max Pressure Differential Exceeded:** Pressure differential per stage exceeds allowed maximum.
- **Bit 17 – Estimated Cylinder Discharge Temperatures are High:** Estimated discharge temperature exceeds cylinder's allowed limit.
- **Bit 18 – Low Compression Ratio:** Ratio drops below allowed minimum.
- **Bit 19 – High Compression Ratio:** Ratio exceeds allowed maximum.
- **Bit 20 – Ariel Gas Rod Load Exceeded:** Specific to Ariel units; internal rod load checks not met.
- **Bit 21 – BHP per Throw Limit Exceeded:** Required power exceeds OEM limit per throw.
- **Bit 22 – Under Allowed Load:** Load is too low — risk of engine stalling.
- **Bit 23 – Non-permitted Operations:** Load step restricted due to special clipping logic.
- **Bit 24 – Cooler Flow Exceeded:** Flow through cooler exceeds its cooling capacity.
- **Bit 25 – User Speed Restriction:** Speed blocked by user-defined limits (often due to vibration).
- **Bit 26 – GE Gas Rod Load Exceeded:** Specific to GE units.
- **Bit 27 – GE Crank Pin Load Exceeded:** Specific to GE units.
- **Bit 28 – Cooler MAWP Exceeded:** Cooler pressure exceeds its rated MAWP.
- **Bit 29 – Non-lubed Limits Exceeded:** OEM-specific non-lubricated compressor limits breached.
- **Bit 30 – Torsional Issue(s):** Reserved for future use.
- **Bit 31 – Acoustic Issue(s):** Reserved for future use.
- **Bit 32 – Mean Cylinder Pressure Too Low:** Mean pressure < 0 psiG — risk of atmospheric gas entering cylinder via packing case.

8.1.5 Register 151

Set the desired option (0 to 15) to help avoid shut downs:

- **0:** Do not determine any options for avoiding shut downs (Default).
- **1:** Only consider changes to load step.
- **2:** Only consider changes to speed.
- **3:** Only consider changes to load step and speed.
- **4:** Only consider changes to suction pressure.
- **5:** Only consider changes to load step and suction pressure.
- **6:** Only consider changes to speed and suction pressure.
- **7:** Consider changes to load step, speed, and suction pressure.
  - If you also want to consider engaging recycle, add **8** to any of the above.
  - **14** is common for gas gathering units that typically only have one load step but speed, suction throttling, and recycle are the potential load (and flow) control options.
  - **3** is common for pipeline units that typically have many load steps and also use speed, but rarely (if ever) pinch suction pressure or recycle gas back.
  - **7** is common for injection/withdrawal units.
  - **15** can be used if all options are to be considered by the control panel.
  - **When multiple options are specified, the order for which they are considered is always:** First load steps, then speed, then suction pressure, and then finally recycle.

8.1.6 Register 181

Used to set the desired level for controlling liquids formation:

- **0 (Startup Value):** Min suction temperatures to prevent liquids formation not calculated.
- **1 (Most Common):** Used to prevent hydrocarbon liquids and hydrates.
- **2 (Gas Gathering):** Used to prevent liquid water, hydrocarbon liquids and hydrates.
- **3 (Process Gases):** Used to prevent hydrocarbon liquids, used with a dry gas.

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