

Alarm Conditions

Trip Conditions

AAH1239 []

FAL1294 []

TAH1294 []

TAL1500A []

TAL1500B []

LAH1601 []

LAH1661 []

TAH1520 []

PAH1510A []

PAL1510B []

TAL1510A []

TAL1510B []

MANUAL TRIP

	TRIP_	First Out
HL1000	[]	●
AAHH1239	[]	●
HL1282	[]	●
HL1500	[]	●
HL1630	[]	
HL1660	[]	
FALL1294	[]	
TAHH1294	[]	●
TALL1500A	[]	●
TALL1500B	[]	
LAHH1601	[]	●
LAHH1661	[]	●
TAHH1520	[]	●
PAHH1510A	[]	●
TALL1510A	[]	●
TALL1510B	[]	
HSL1295	[]	●

12P01
COLD BOX

Interlock

COOL DOWN
DEFROST
INFO

RESET

MANUAL
TRIP

S
A
B
C
D

Current

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

Cold Box Load Adaptation

Load Adaptation Mode []

Remote Setpoints

MP Air []
GOX []
GAR []
Air Turbine []
Air Booster []
HP Air []
Air Meas []
LIN May []

Cold Box Demand

GOX 12-HIC1297A []
GAR 12-HIC1297B []
LIN 12-HIC1297C []
GOX 12-HIC1297D []
LAR 12-HIC1297E []
AG To Booster 12-HIC1299 []%

Actual Setpoints

FIC1213 []
FIC1294 []
FIC1500A []
FIC1510A []
FIC1515A []
PIC1515 []
FIC1520 []
FIC1530 []
FIC1557 []
LIC1601 []
FIC1628 []
FIC1630A []
LIC1701 []
FIC1704A []
FIC1712 []

12E09
12GAI_F
12GI_F
12GAI_F
12B06
12K02
12LI_F
12K10
12K11

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

P L A N T 1 2
A L C O P E R A T I N G D I S P L A Y

PRODUCT	DESCRIPTION	MODEL	TARGET	INPUT
<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">GOX-PRODUCT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">LOX-PRODUCT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">LIN-PRODUCT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">LAR-PRODUCT</div>	<p>RUNTIME</p> <p>AIR TO K02</p> <p>TURBINE FLOW</p> <p>AIR TO K02</p> <p>LINEQUIVALENT</p> <p>LAR-PRODUCT</p> <p>GAN-PRODUCT</p>			
<div style="border: 1px solid black; padding: 5px; display: inline-block;">HOST</div>				
ALC-STATUS DISPLAY				

EL7099	C01	RUNNING	●	<div style="border: 1px solid black; padding: 5px; display: inline-block;">TRANSIT</div>
EL7299	C05	RUNNING	●	
ZLL7499	D01	RUNNING	●	
ZLL7599	D02	RUNNING	●	
EL7399	C50	RUNNING	●	
EL8399	C51	RUNNING	●	

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

Booster Compr.

Air Purif. Unit

O2 / N2 Column

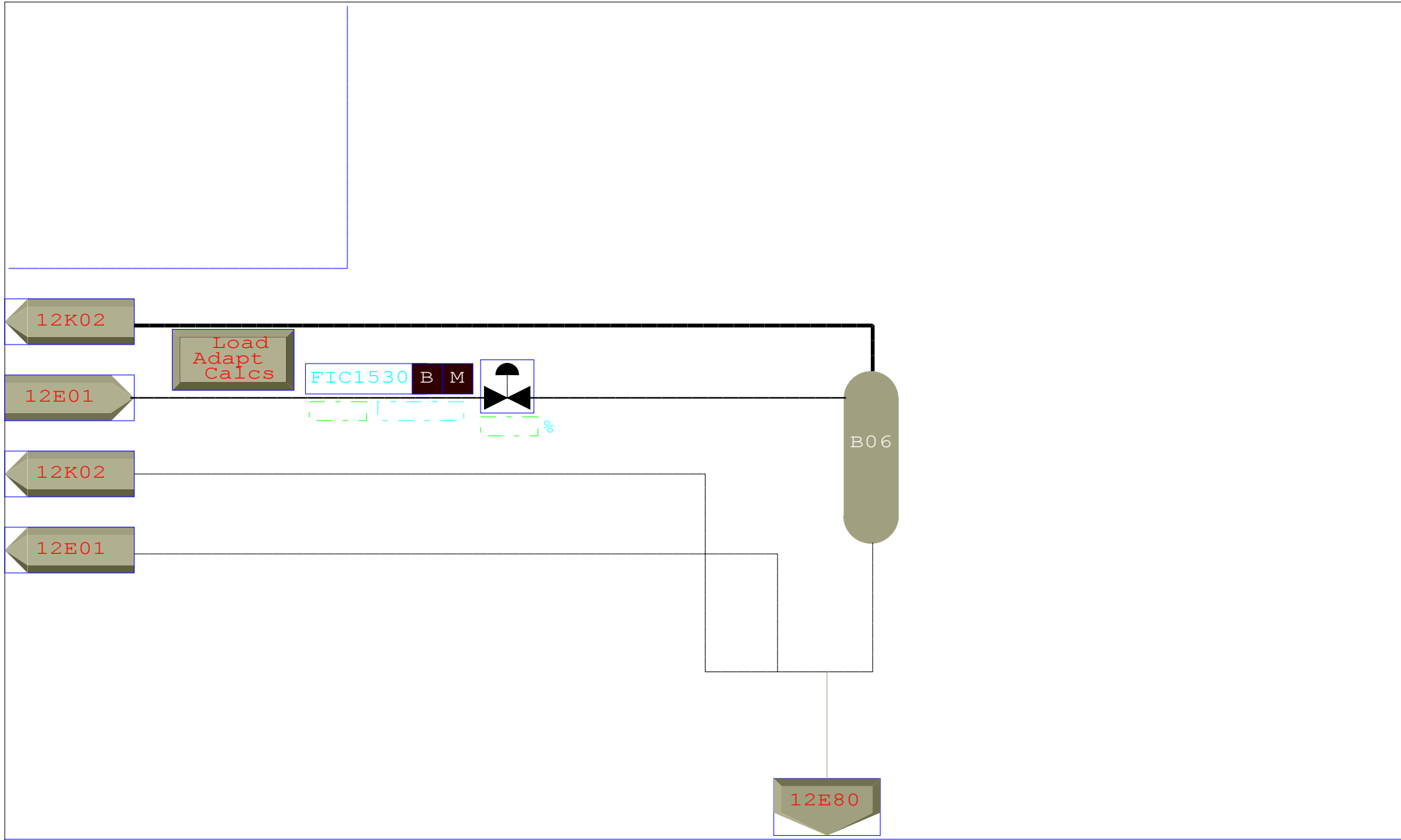
Argon Rectif.

TRENDS

P L A N T 1 2
A L C C O N T R O L L E R D I S P L A Y

TAGNAME	DESCRIPTION	MODE	ACT.PV	ACT.SP	MODEL	TARGET	INPUT	DEV	HST	HST-SWITCH
FIC1520	AIR EXPANDER	M B								
FIC1530	AIR FROM E01 TO K01	M B								
FIC1510A	GOX PRODUCT	M B								
FIC1630A	LIN PRODUCT	M B								
FIC1630B	LIN BLOWOFF	M B								
PIC1754A	BYPASS P10A	M B								
PIC1754B	BYPASS P10A	M B								
PIC1764A	BYPASS P10B	M B								
PIC1764B	BYPASS P10B	M B								
FIC1628	LIQ AIR B02 TO K02	M B								
FIC1510B	GOX BLOWOFF	M B								
FIC1515A	AR PRODUCT	M B								
FIC1515B	AR BLOWOFF	M B								
FIC1704A	ARGON IN K11	M B								
FIC1704B	ARGON BLOWOFF	M B								
LIC1726B	LIQ ARGON	M B								
LIC1701	LOX IN K10	M B								
LIC1660B	LOX BLOWOFF	M B								
FIC1500A	GAN PRODUCT	M B								
FIC1500B	GAN BLOWOFF	M B								
PIC1626	WASTE N2 OUTLET K02	M B								
LIC1601	LR IN K01	M B								
FIC1712	LR VAPOR TO K02	M B								
PIC1712	LR VAPOR TO K02	M B								
FIC1557	LEAN LIQ TO K02	M B								
FIC1294	E09 CB AIR	M B								
PDIC7408	D01C BOOST ANTISURGE	M B								
PDIC7508	D02C BOOST ANTISURGE	M B								
FIC1213	R01/R02 RESIDUAL GAS	M B								
PIC1213A	R01/R02 RESIDUAL GAS	M B								
PIC1213B	R01/R02 RESIDUAL GAS	M B								

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
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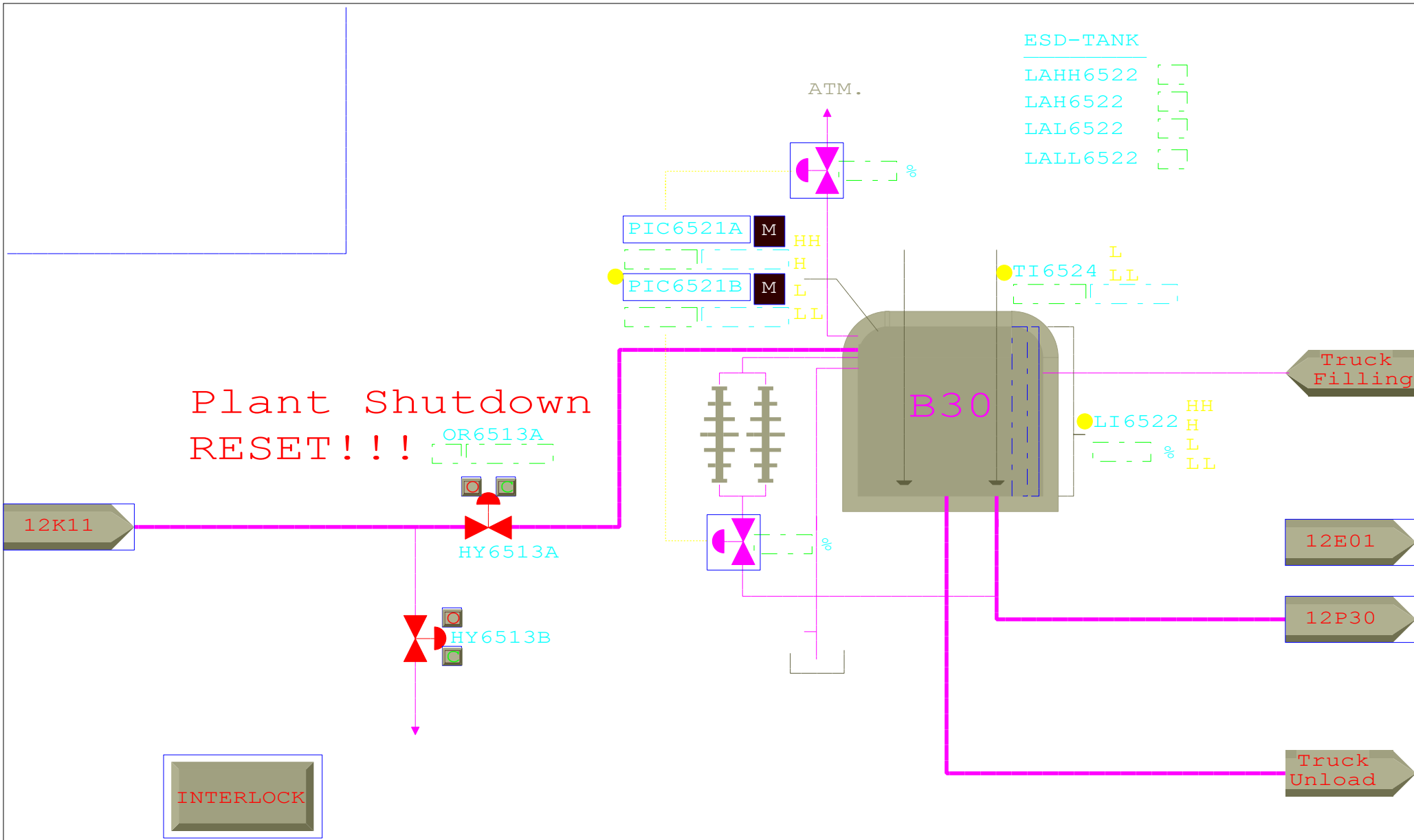


S

Current

A
B
C
D

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



Current

S

A

B

C

D

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

Booster Compr.

Air Purif. Unit

O2 / N2 Column

Argon Rectif.

TRENDS

ESD-TANK

LAHH6122 []

LAH6122 []

LAL6122 []

LALL6122 []

ATM.

PIC6121A M HH
PIC6121B M L
LL

TI6124 L
LL

LI6122 HH
H
L
LL

Plant Shutdown
RESET!!! OR6113A

12LI_F

HY6113A

Plant Shutdown
RESET!!! OR6113B

HY6113B

12P40

Truck
Unload

INTERLOCK

Current

S

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

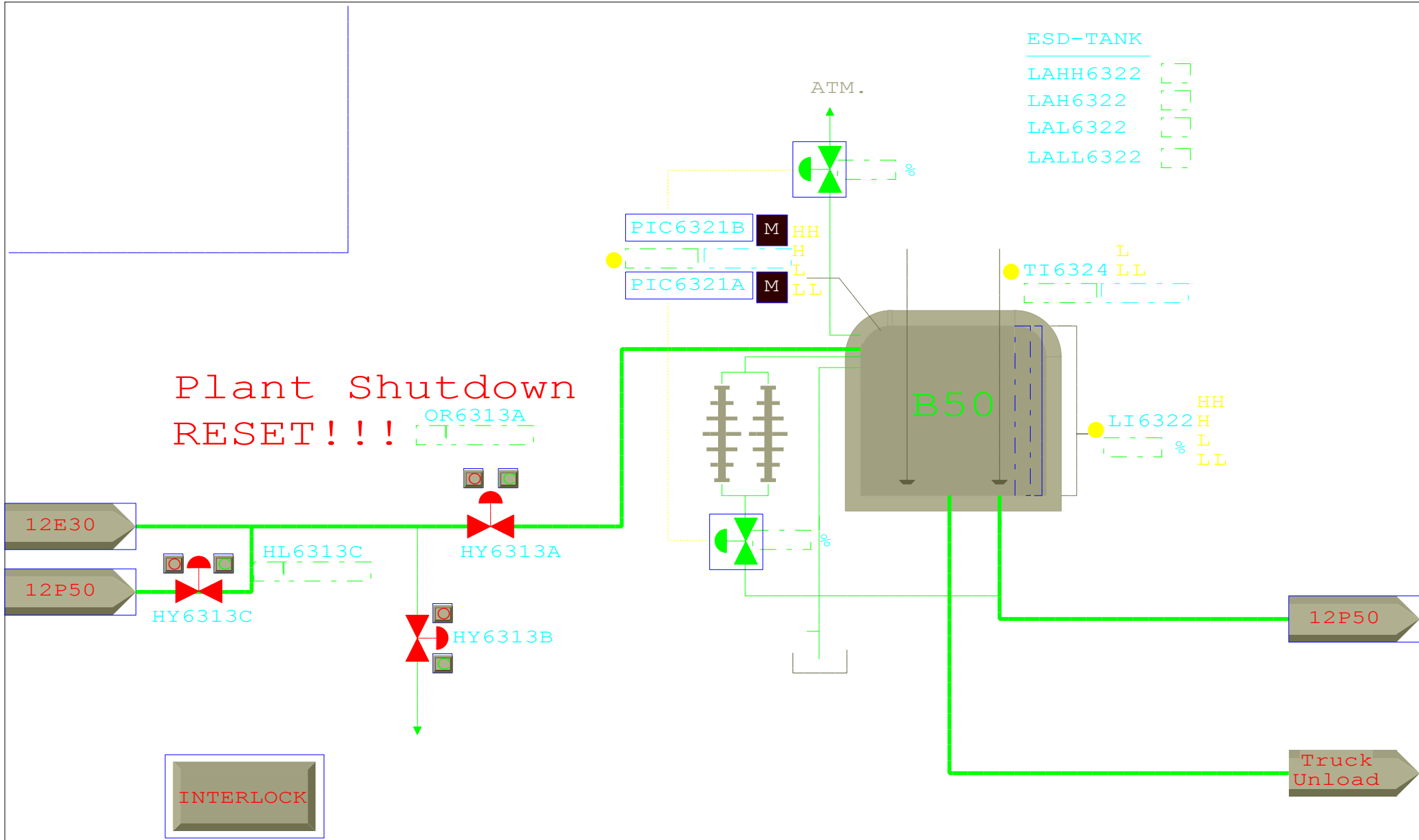
Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS



ESD-TANK

LAHH6322 []

LAH6322 []

LAL6322 []

LALL6322 []

Current

S

A

B

C

D

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

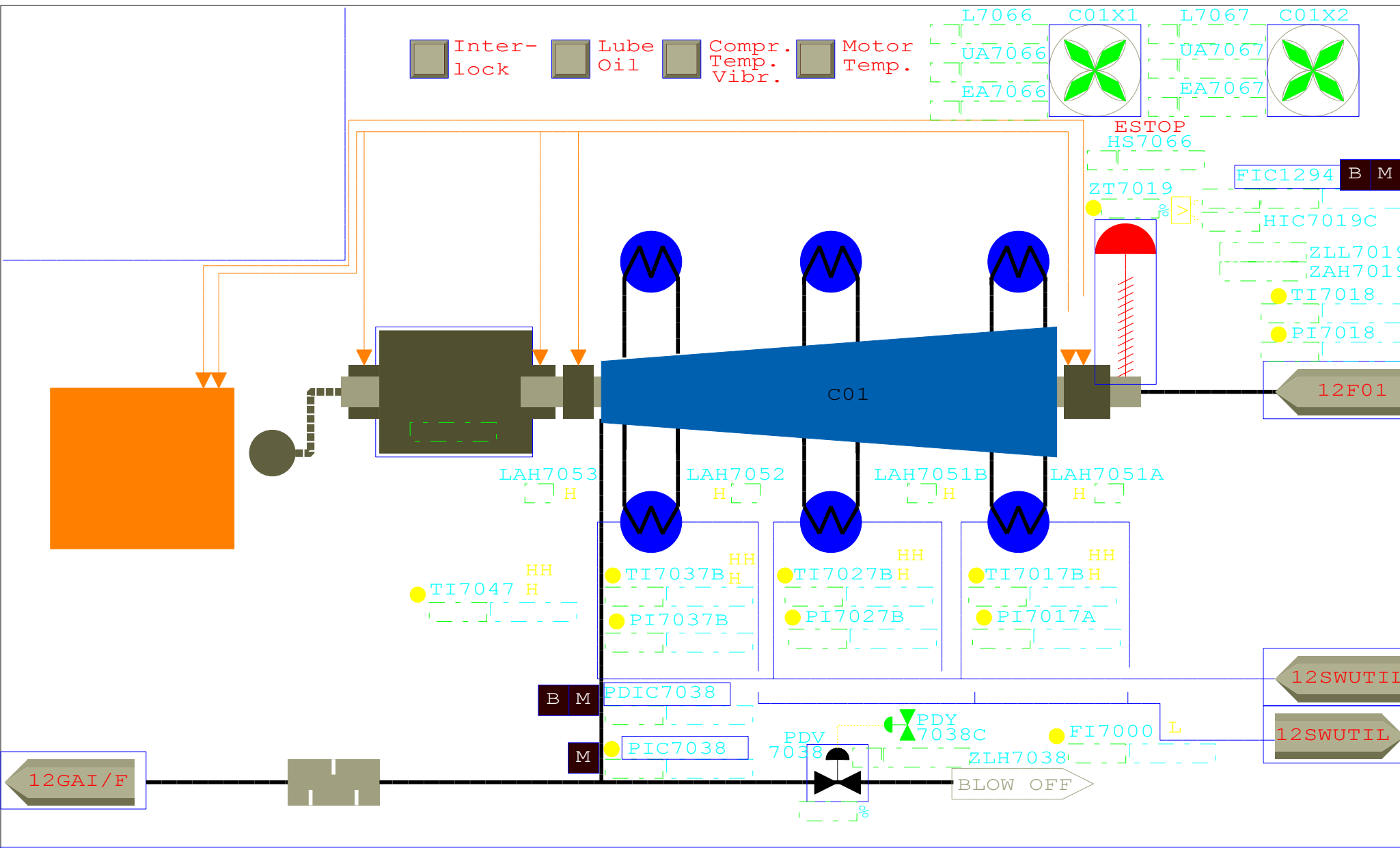
Booster Compr.

Air Purif. Unit

O2 / N2 Column

Argon Rectif.

TRENDS



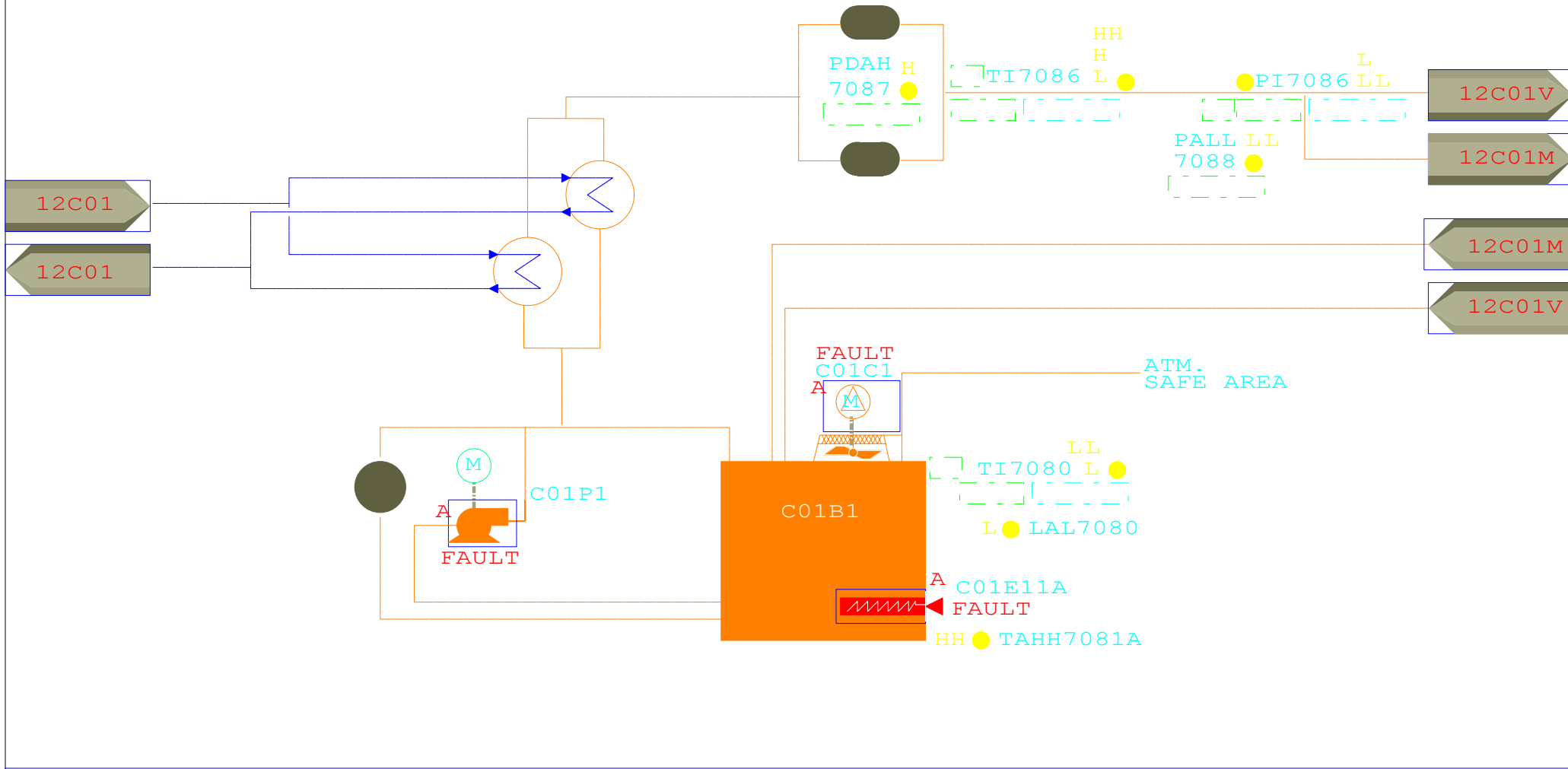
S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------

C01 Compressor Lube Oil

Inter-lock
 Proc. Temp.
 Compr. Temp.
 Motor Temp.



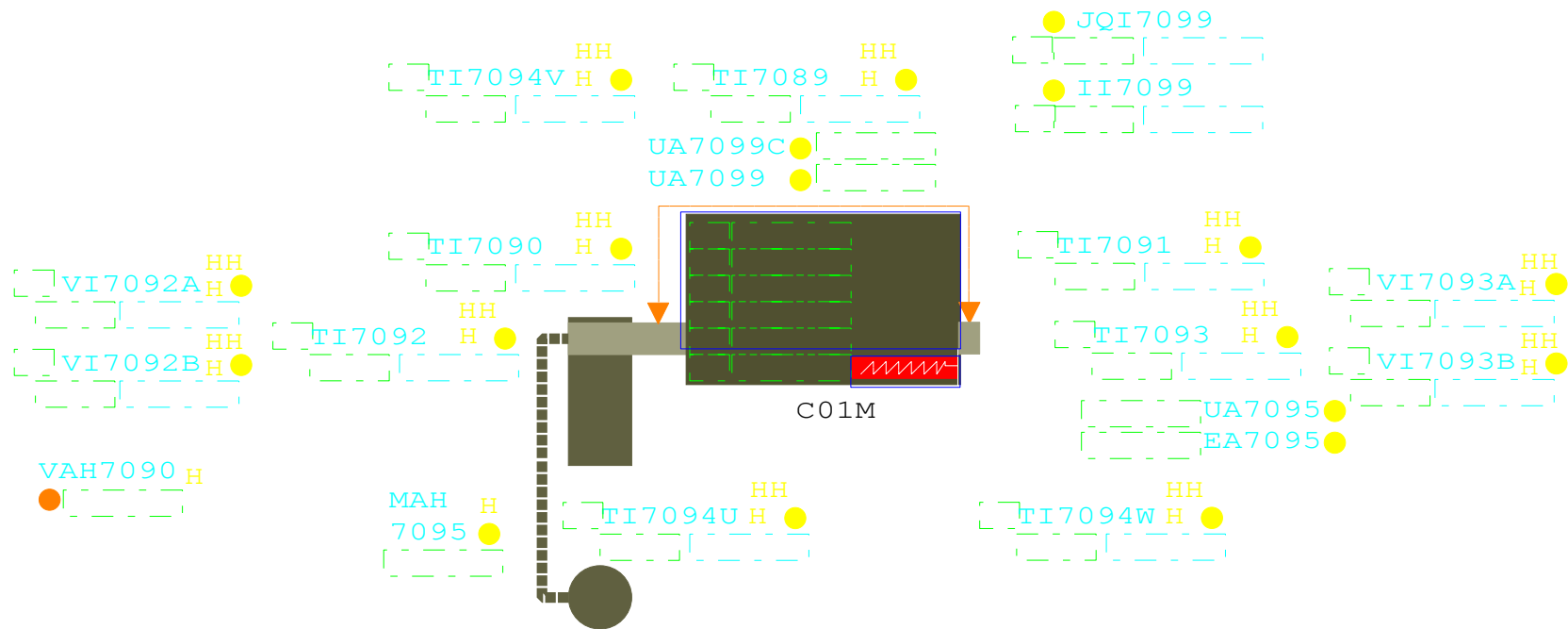
S

Current

A
B
C
D

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Inter-lock Proc Lube Oil Compr. Temp.



S

Current

A
B
C
D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

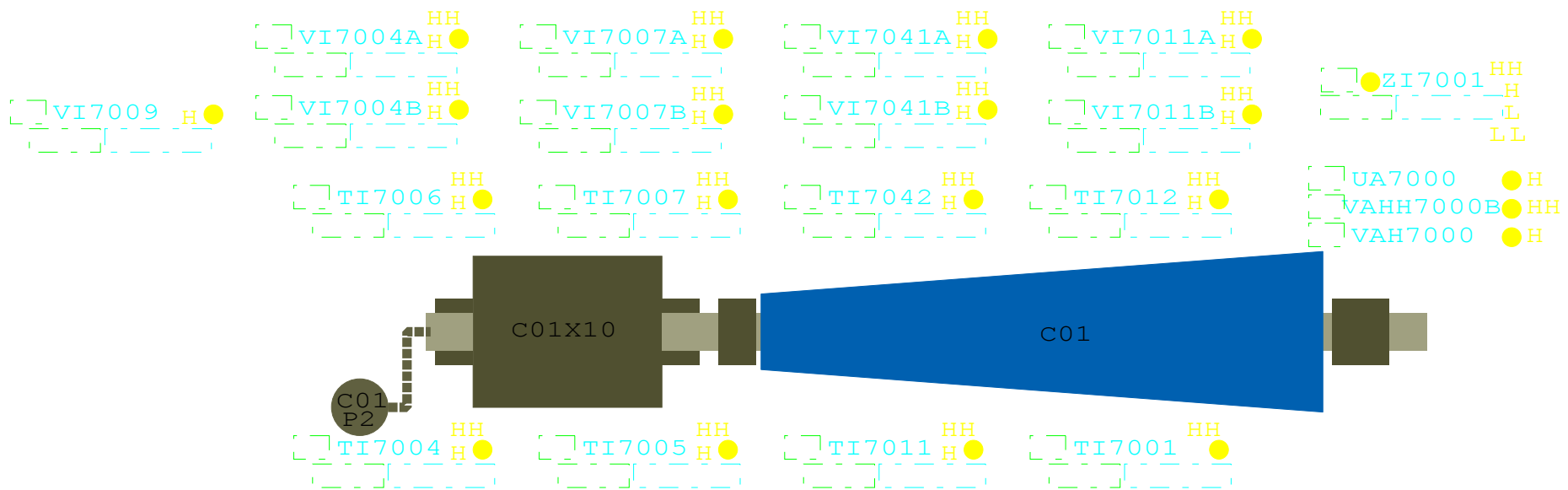
Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

Inter-lock
 Proc ess
 Lube Oil
 Motor Temp.



S

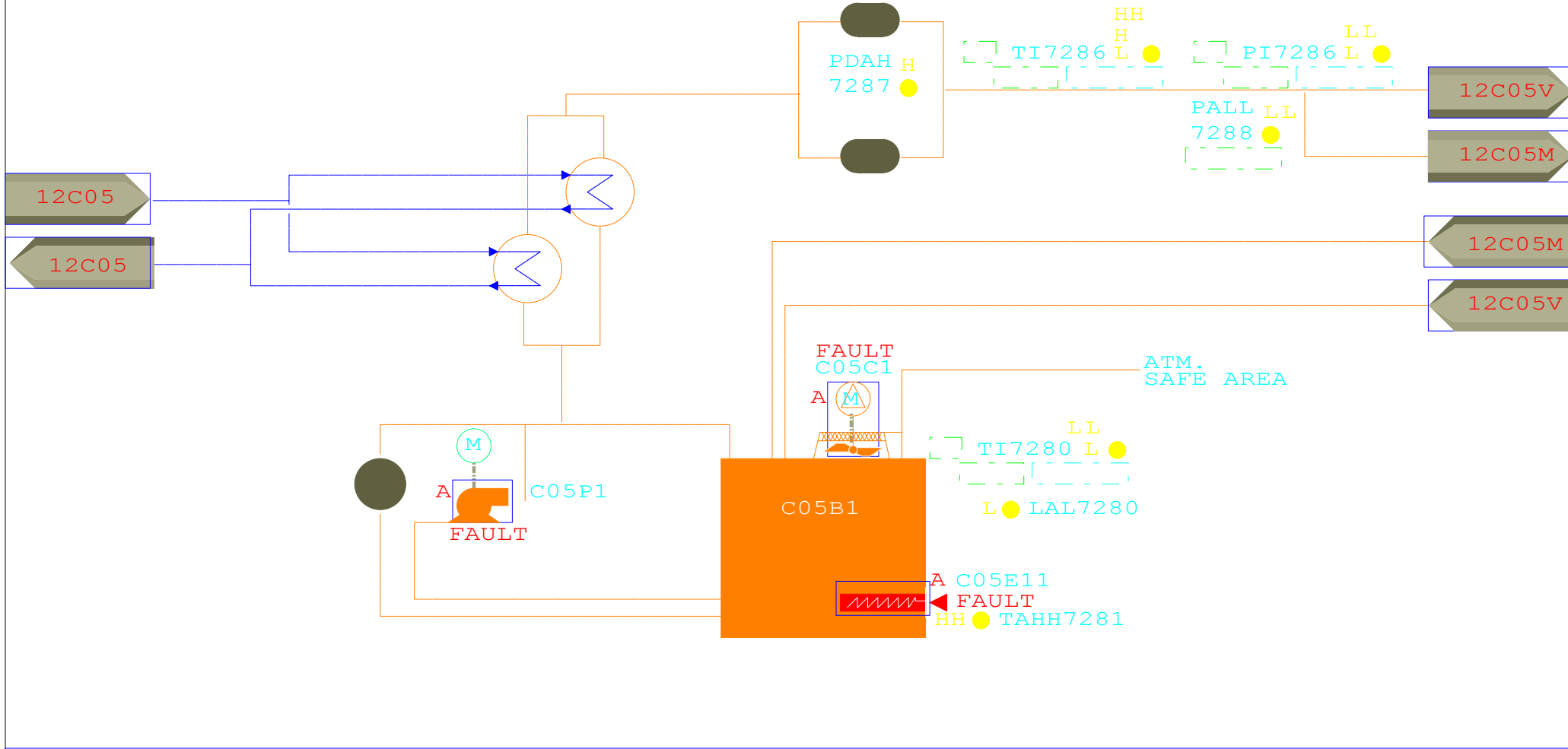
Current

A
B
C
D

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

C05 Compressor Lube Oil

Inter-lock
 Process
 Compr. Temp.
 Motor Temp.

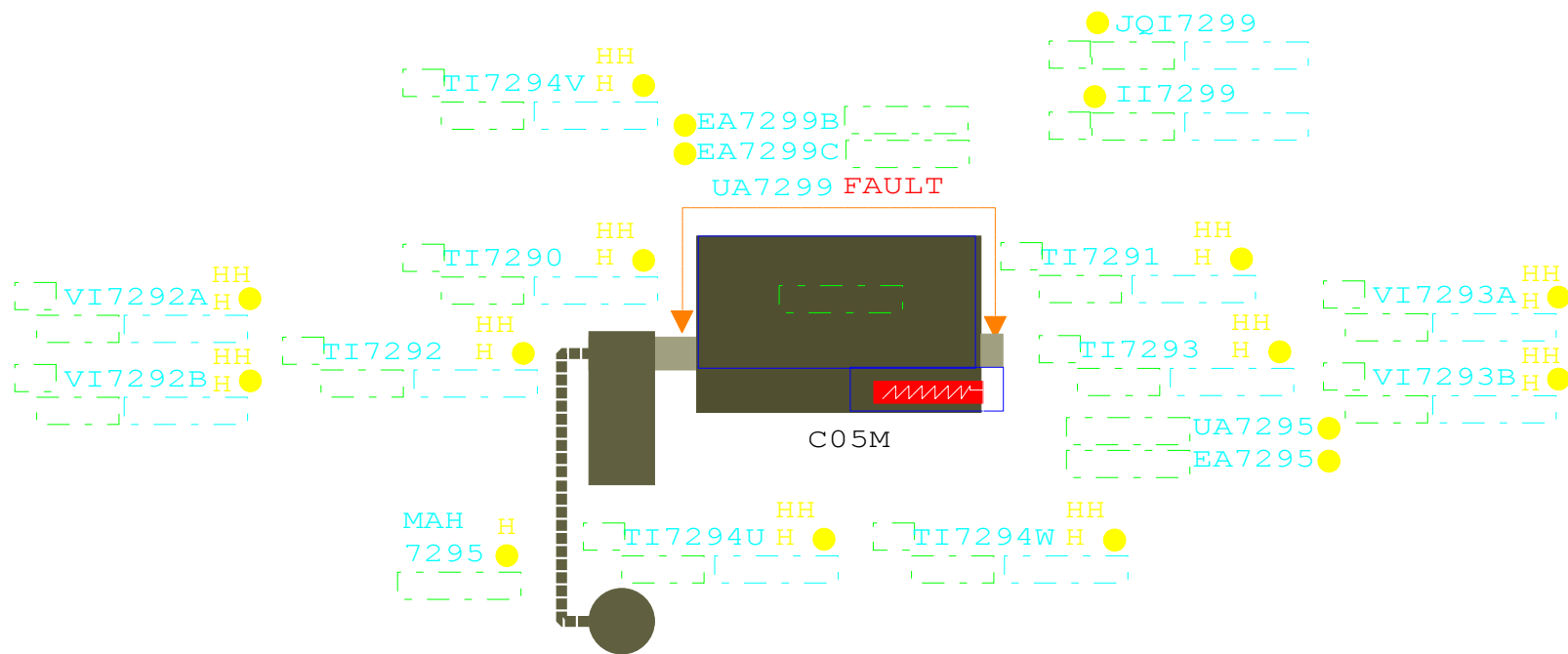


S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Inter-lock
 Proc ess
 Lube Oil
 Compr. Temp.



S

Current

A
B
C
D

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

Booster Compr.

Air Purif. Unit

O2 / N2 Column

Argon Rectif.

TRENDS

Start up Conditions

Alarm Conditions

Trip Conditions

Out First

READY TO START

UA7298C SD

UL7297

L7297

FAL7200

PAL7216

ZSL7219

ZLH7228

LAL7280

EL7283

EL7285A

TAL7286

MAH7295

EL7299

VAH7200

ZAH7201

VAH7203A

VAH7203B

TAH7204

VAH7204A

VAH7204B

TAH7205

TAH7206

TAH7207

VAH7209

VAH7211A

VSH7211B

TAH7212

ZAH7219

PAL7216

VAH7221A

VSH7221B

TAH7222

TAH7226

VAH7231A

VSH7231B

TAH7232

TAH7236

VAH7241A

VAH7241B

TAH7242

TAH7246

TAH7268

PAL7286

TAH7286

VAH7290

TAH7290

TAH7291

TAH7292

VAH7292A

VAH7292B

VAH7293A

VAH7293B

TAH7293

TAH7294U

TAH7294V

TAH7294W

VAHH7200

ZAHH7201

VAHH7203A

VAHH7203B

TAHH7204

VAHH7204A

VAHH7204B

TAHH7205

TAHH7206

TAHH7207

VAHH7211A

VAHH7211B

TAHH7212

ZAHH7219

PALL7216

VAHH7221A

VAHH7221B

TAHH7222

TAHH7226

VAHH7231A

VAHH7231B

TAHH7232

TAHH7236

VAHH7241A

VAHH7241B

TAHH7242

TAHH7246

TAHH7268

PALL7286

TAHH7286

PALL7288A

VAHH7290

TAHH7290

TAHH7291

TAHH7292

VAHH7292A

VAHH7292B

VAHH7293A

VAHH7293B

TAHH7293

TAHH7294U

TAHH7294V

TAHH7294W

RESET

C05

Operate

Control

Start up Conditions

Alarm Conditions

Trip Conditions

Out First

READY TO START

UA7298C SD

UL7297

L7297

FAL7200

PAL7216

ZSL7219

ZLH7228

LAL7280

EL7283

EL7285A

TAL7286

MAH7295

EL7299

VAH7200

ZAH7201

VAH7203A

VAH7203B

TAH7204

VAH7204A

VAH7204B

TAH7205

TAH7206

TAH7207

VAH7209

VAH7211A

VSH7211B

TAH7212

ZAH7219

PAL7216

VAH7221A

VSH7221B

TAH7222

TAH7226

VAH7231A

VSH7231B

TAH7232

TAH7236

VAH7241A

VAH7241B

TAH7242

TAH7246

TAH7268

PAL7286

TAH7286

VAH7290

TAH7290

TAH7291

TAH7292

VAH7292A

VAH7292B

VAH7293A

VAH7293B

TAH7293

TAH7294U

TAH7294V

TAH7294W

Bypass

VAHH7200

ZAHH7201

VAHH7203A

VAHH7203B

TAHH7204

VAHH7204A

VAHH7204B

TAHH7205

TAHH7206

TAHH7207

VAHH7211A

VAHH7211B

TAHH7212

ZAHH7219

PALL7216

VAHH7221A

VAHH7221B

TAHH7222

TAHH7226

VAHH7231A

VAHH7231B

TAHH7232

TAHH7236

VAHH7241A

VAHH7241B

TAHH7242

TAHH7246

TAHH7268

PALL7286

TAHH7286

PALL7288A

VAHH7290

TAHH7290

TAHH7291

TAHH7292

VAHH7292A

VAHH7292B

VAHH7293A

VAHH7293B

TAHH7293

TAHH7294U

TAHH7294V

TAHH7294W

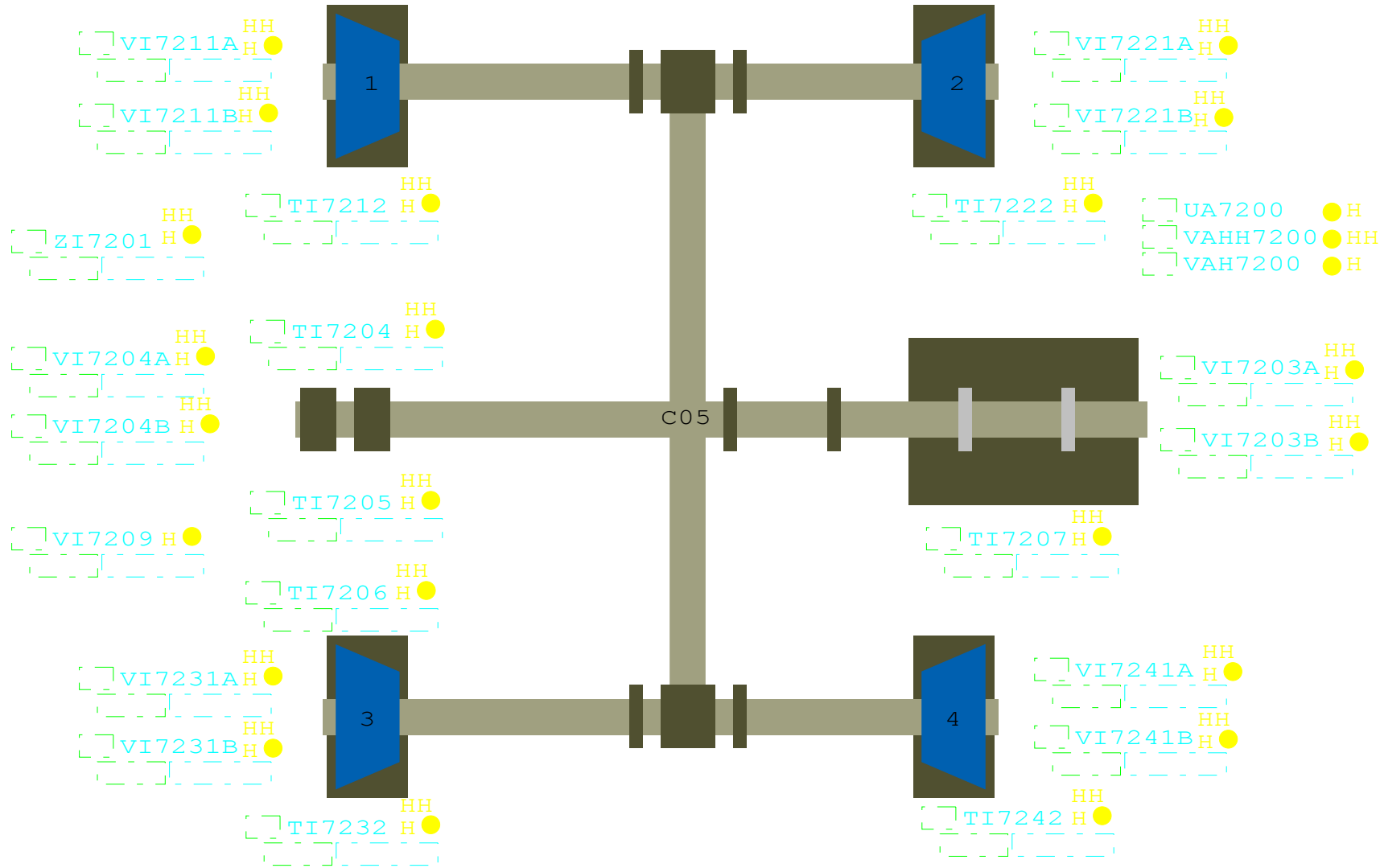
RESET

C05

Operate

Control

Inter-lock
 Process
 Lube Oil
 Motor Temp.



S

Current

A
B
C
D

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

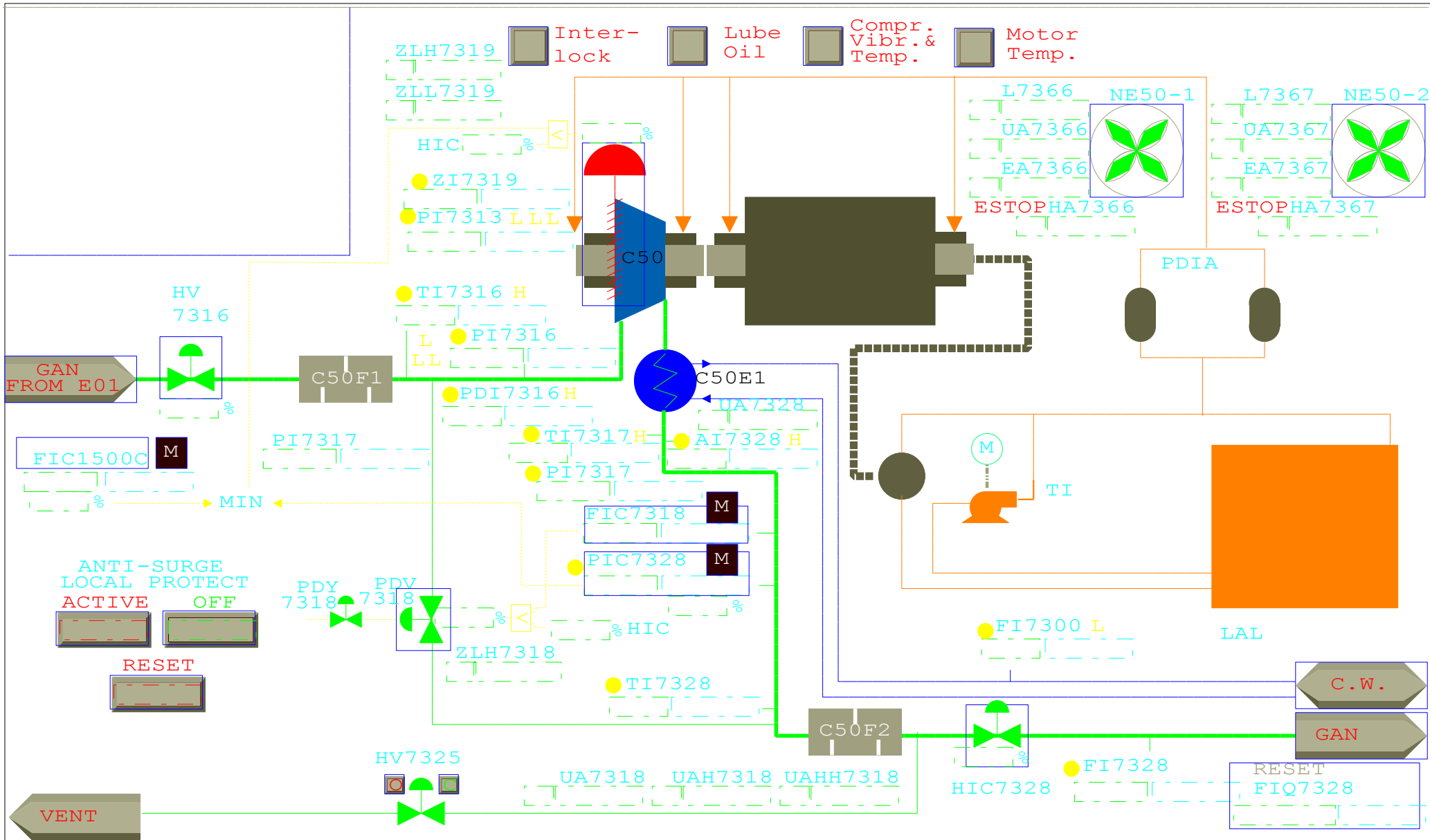
Booster Compr.

Air Purif. Unit

O2 / N2 Column

Argon Rectif.

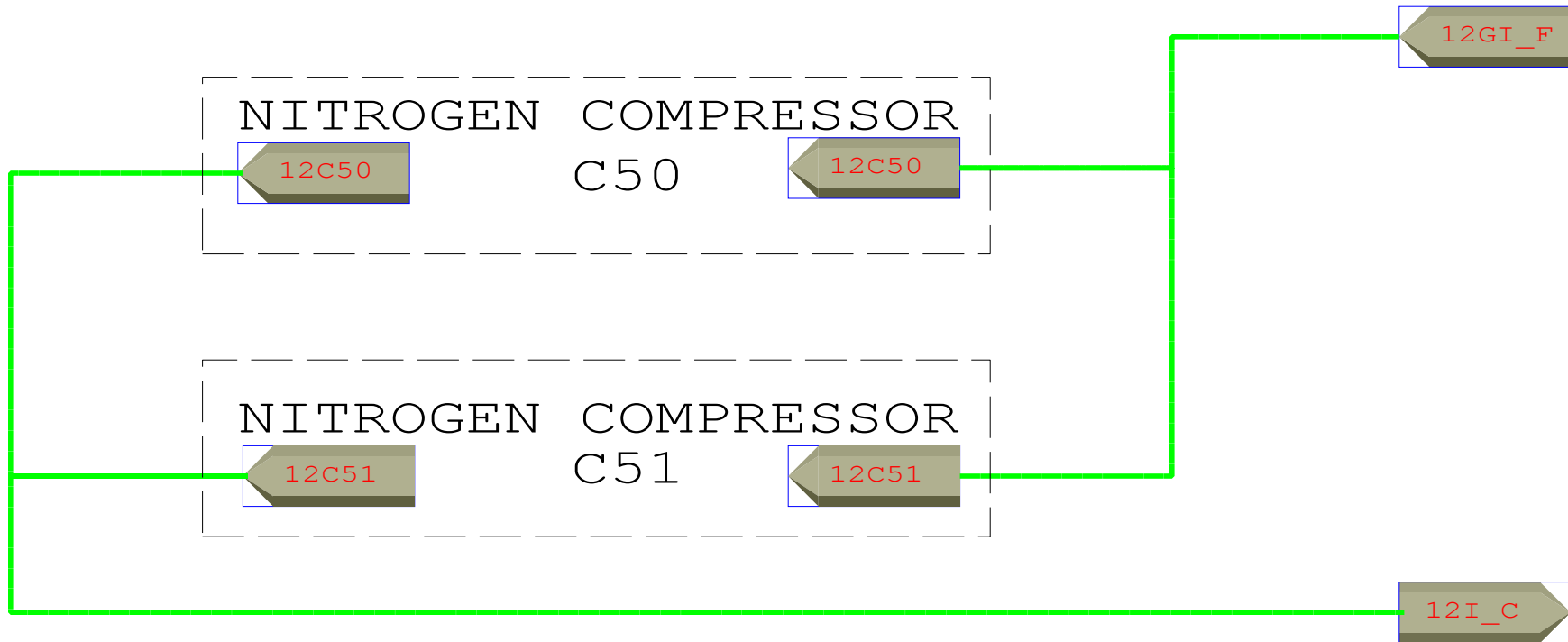
TRENDS



S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------



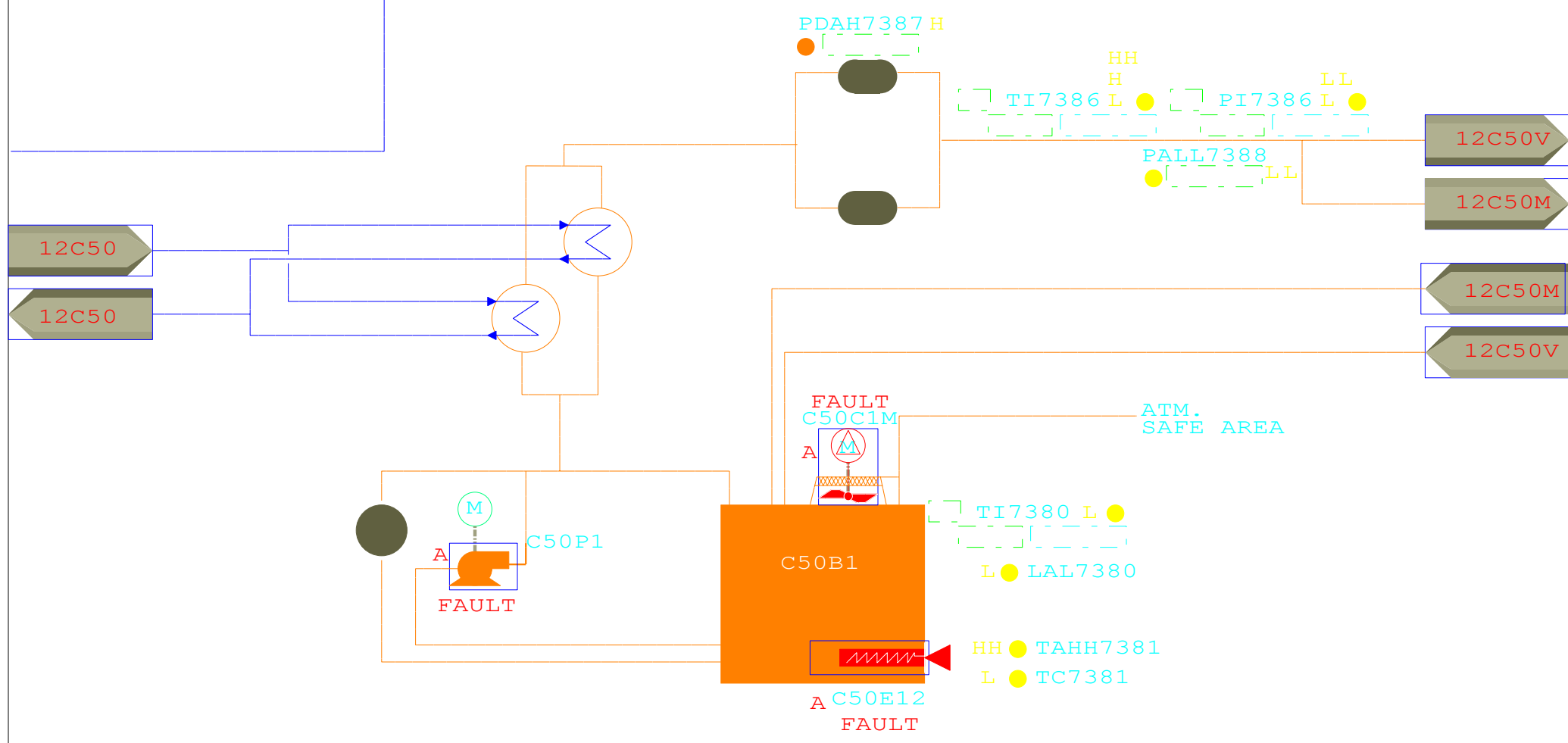
S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------

C50 N2 Compressor Lube Oil

Inter-lock
 Proc. Temp.
 Compr. Temp.
 Motor Temp.



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Interlock Proc Lube Compr.
lock ess Oil Temp.

UL7397 READY TO
START

UA7398C TRIP

TI7394V HH

JQI7399
II7399

VI7392A HH
VI7392B HH

TI7392 HH

C50M
FAULT
ESTOP

TI7393 HH

VI7393A HH
VI7393B HH

UA7395
EA7395

TI7394U HH
TI7394W HH

VAH7390 H

VAHH7390 HH

S

Current

A
B
C
D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

C50

Start up Conditions

READY TO
START

UA7398C	SD		
UL7397			
FAL7300			
ZLH7318		●	
ZLL7319		●	
LAL7380		●	
EL7385		●	
TAL7386			
EL7399		●	
PAL7316			
EL7383		●	

Alarm Conditions

TAH7306			
PAL7313			
VAH7311B			
TAH7312			
VAH7321B			
TAH7304			
TAH7305			
VAH7311A			
VAH7321A			
PAL7386			
TAH7392			
TAH7393			
TAH7394U			
TAH7394V			
TAH7394W			
PAL7316			
TAH7322			
VAH7390		●	
VAH7392A			
VAH7392B			
VAH7393A			
VAH7393B			
ZAH7301			
TAH7303			
TAH7386			
UAH7318		●	
VAH7300		●	

Trip Conditions

First
Out

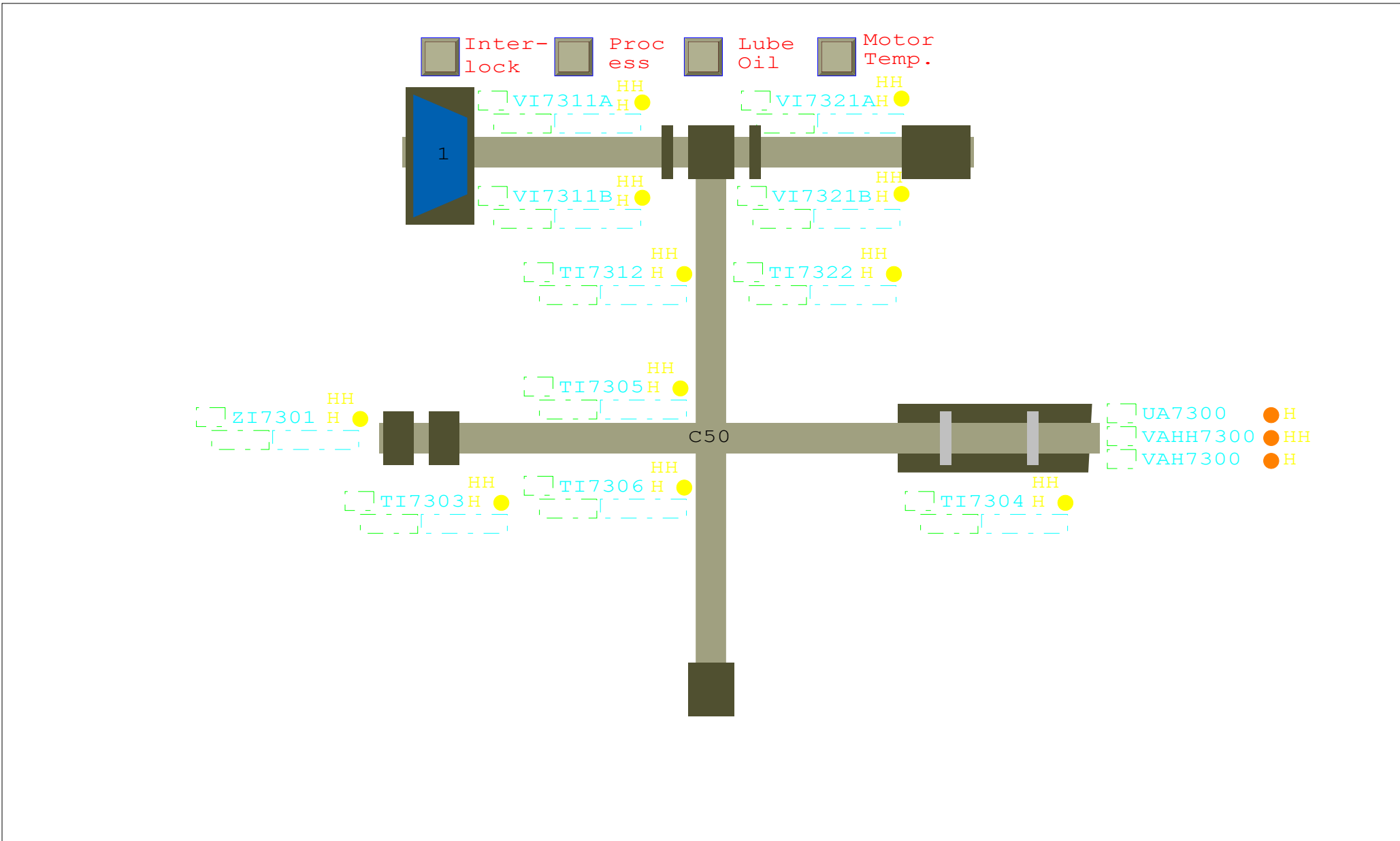
TAHH7306				●
PALL7313				●
VAHH7311B				●
TAHH7312				●
VAHH7321B				●
TAHH7304				●
TAHH7305				●
VAHH7311A				●
VAHH7321A				●
PALL7386				●
PALL7388			●	●
TAHH7392				●
TAHH7393				●
TAHH7394U				●
TAHH7394V				●
TAHH7394W				●
PALL7316				●
TAHH7322				●
VAHH7390			●	●
VAHH7392A				●
VAHH7392B				●
VAHH7393A				●
VAHH7393B				●
ZAHH7301				●
TAHH7303				●
TAHH7386				●
UAHH7318			●	●
VAHH7300			●	●

RESET

C50

Operate

Control



S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

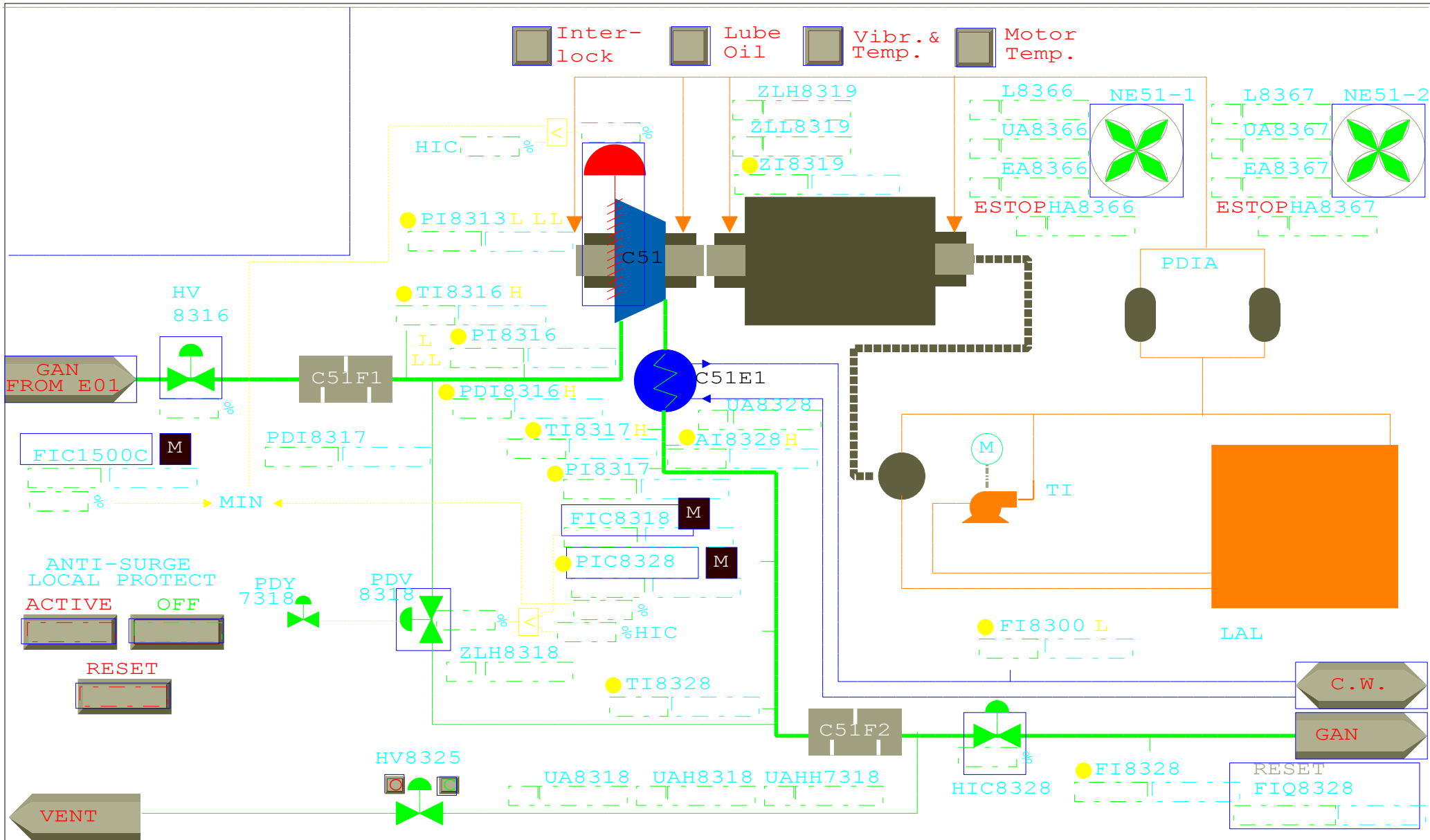
Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS



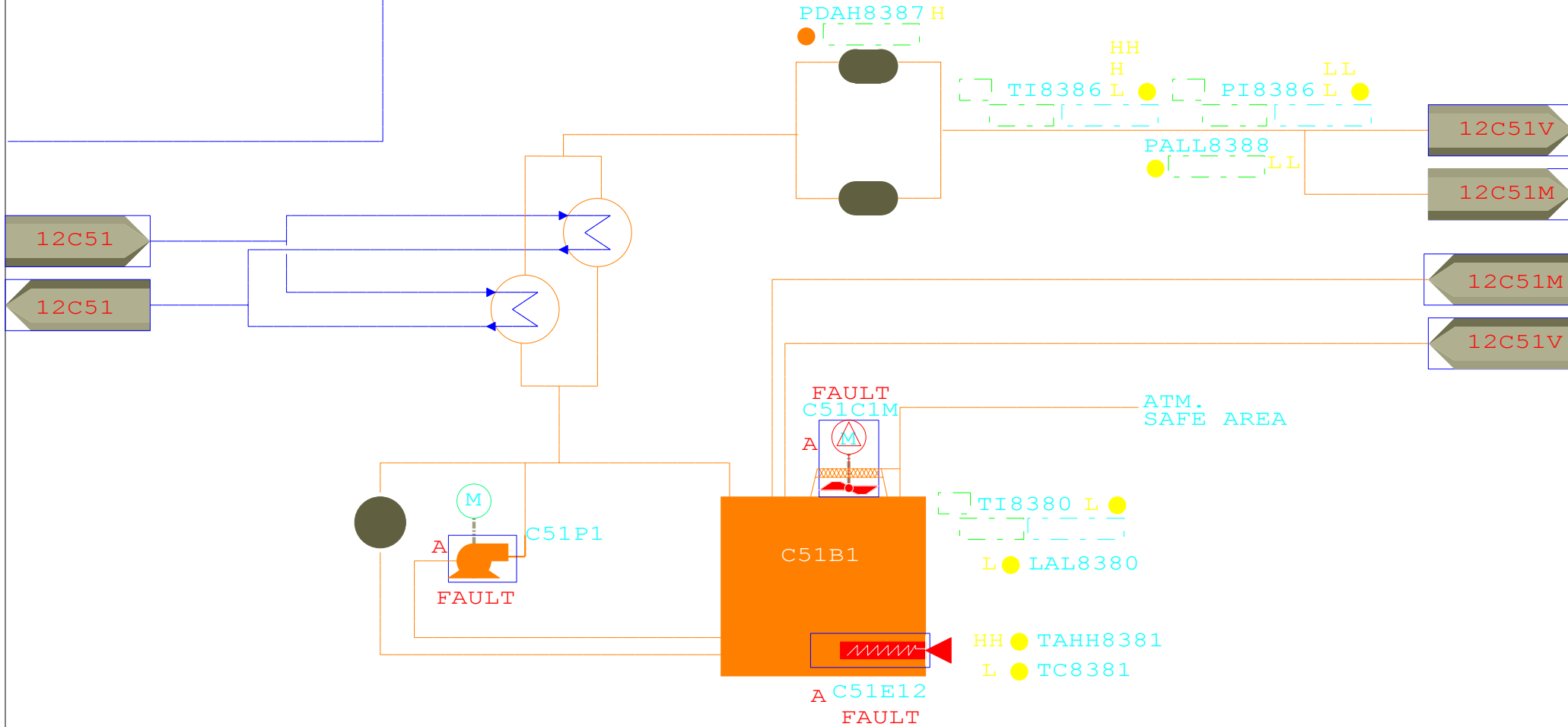
S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

C51 N2 Compressor Lube Oil

Inter-lock
 Proc. Temp.
 Compr. Temp.
 Motor Temp.



S

Current

A
B
C
D

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Inter-lock Proc Lube Compr.
lock ess Oil Temp.

UL8397 READY TO
START

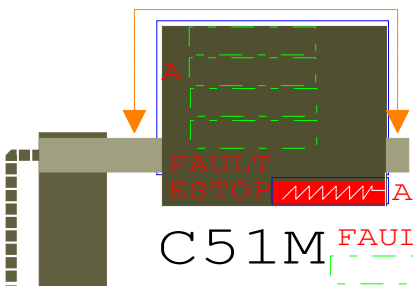
UA8398C TRIP

TI8394V HH
H

JQI8399
II8399

VI8392A HH
H
VI8392B HH
H

TI8392 HH
H



TI8393 HH
H

VI8393A HH
H
VI8393B HH
H

TI8394U HH
H

TI8394W HH
H

VAH8390
H

VAHH8390
HH

S

Current

A
B
C
D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

C51

Start up Conditions

READY TO
START

UA8398C	SD		
UL8397			
FAL8300			
ZLH8318		●	
ZLL8319		●	
LAL8380		●	
EL8385		●	
TAL8386			
EL8399		●	
PAL7316			
EL7383		●	

Alarm Conditions

TAH8306			
PAL8313			
VAH8311B			
TAH8312			
VAH8321B			
TAH8304			
TAH8305			
VAH8311A			
VAH8321A			
PAL8386			
TAH8392			
TAH8393			
TAH8394U			
TAH8394V			
TAH8394W			
PAL8316			
TAH8322			
VAH8390		●	
VAH8392A			
VAH8392B			
VAH8393A			
VAH8393B			
ZAH8301			
TAH8303			
TAH8386			
UAH8318		●	
VAH8300		●	

Trip Conditions

First
Out

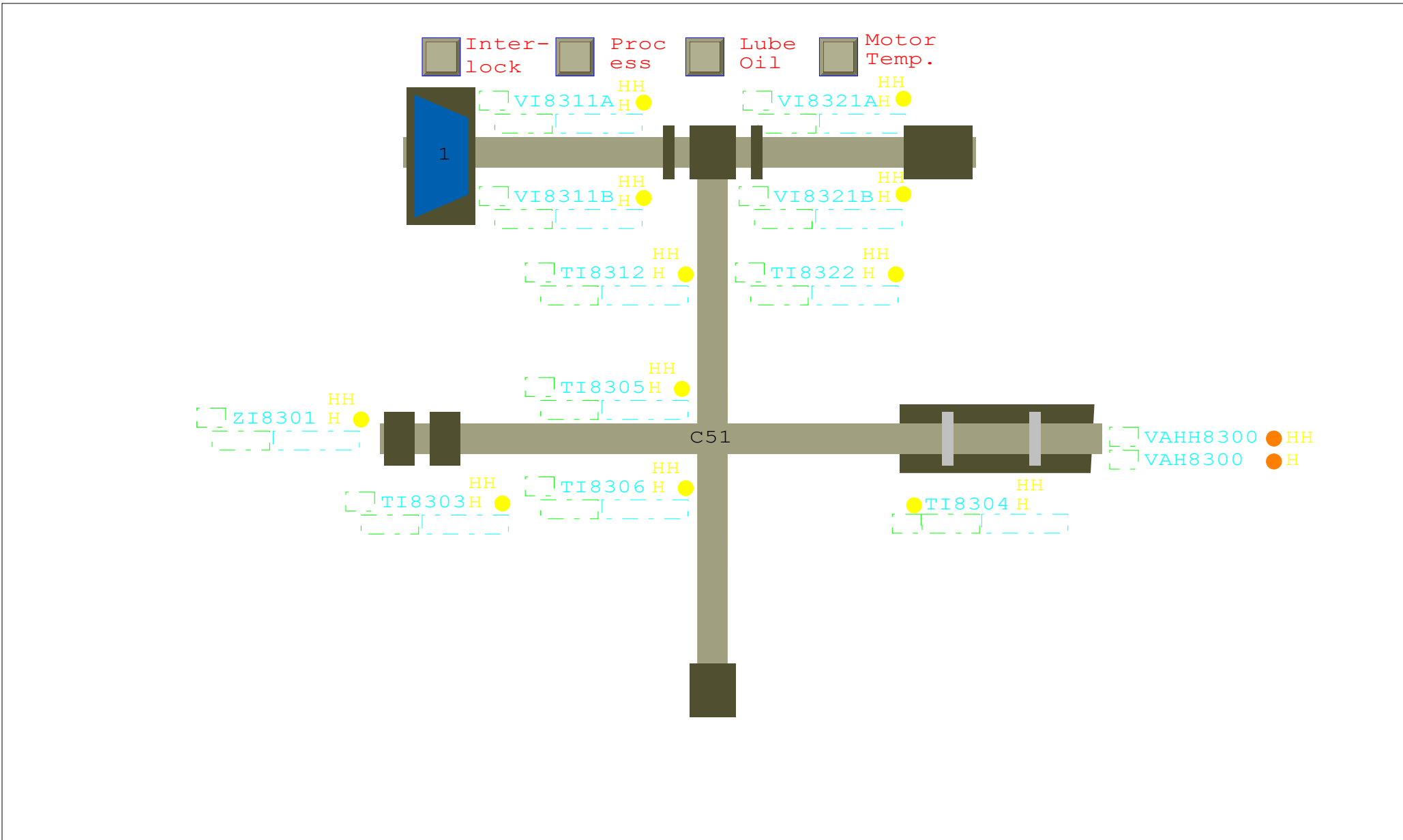
TAHH8306				●
PALL8313				●
VAHH8311B				●
TAHH8312				●
VAHH8321B				●
TAHH8304				●
TAHH8305				●
VAHH8311A				●
VAHH8321A				●
PALL8386				●
PALL8388			●	●
TAHH8392				●
TAHH8393				●
TAHH8394U				●
TAHH8394V				●
TAHH8394W				●
PALL8316				●
TAHH8322				●
VAHH8390			●	●
VAHH8392A				●
VAHH8392B				●
VAHH8393A				●
VAHH8393B				●
ZAHH8301				●
TAHH8303				●
TAHH8386				●
UAHH8318			●	●
VAHH8300			●	●

RESET

C51

Operate

Control



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Tag-No.	Description	ON DEMAND-RESET	Current	Prev. Day
FIQ6001		RESET	KNm3	KNm3
FIQ6032		RESET	KNm3	KNm3
FIQ6036		RESET	KNm3	KNm3
FIQ6171		RESET	KNm3	KNm3
FIQ6174		RESET	KNm3	KNm3
FIQ6371		RESET	KNm3	KNm3
FIQ6374		RESET	KNm3	KNm3
FIQ6571		RESET	KNm3	KNm3
FIQ6574		RESET	KNm3	KNm3



S

Current

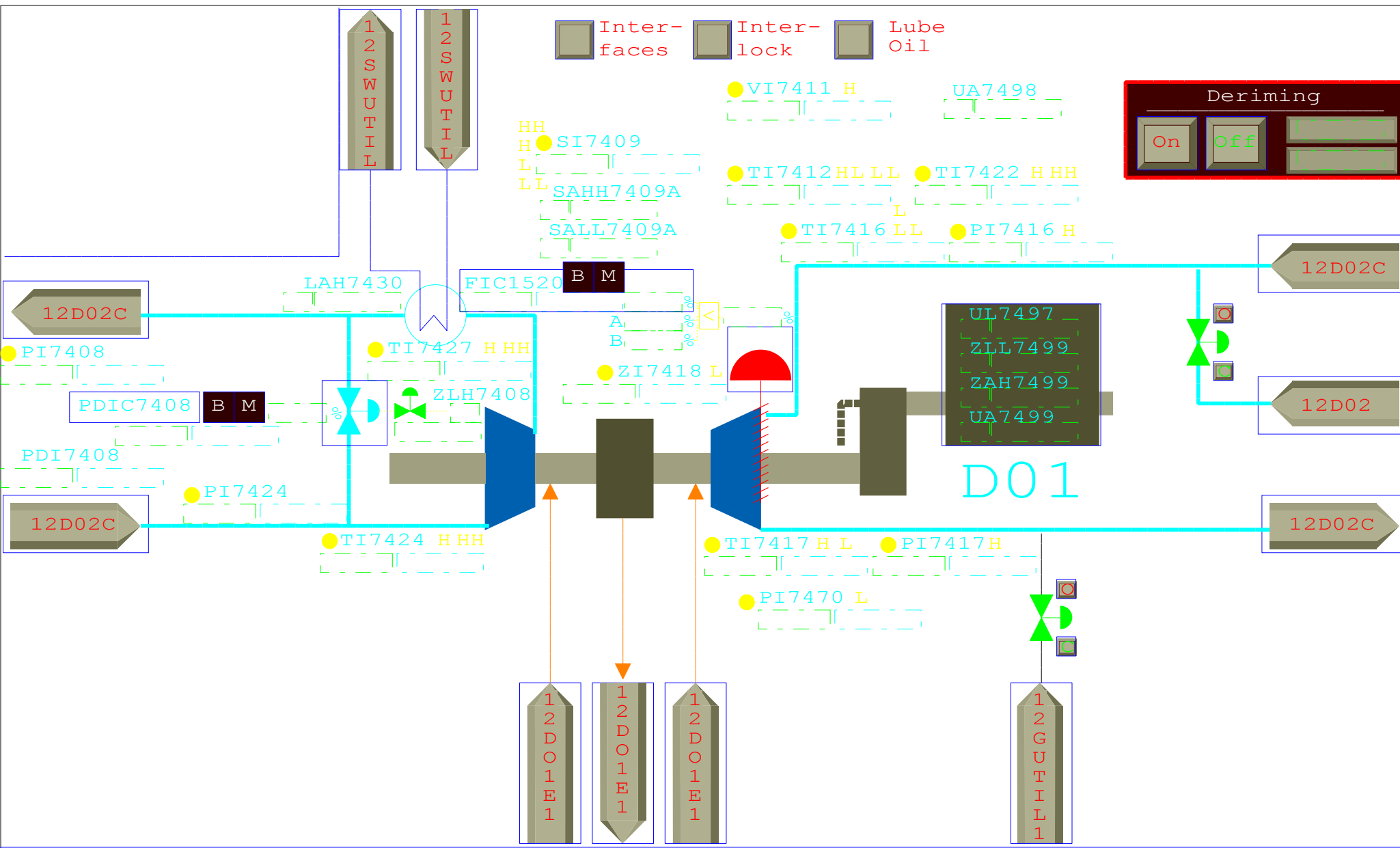
A

B

C

D

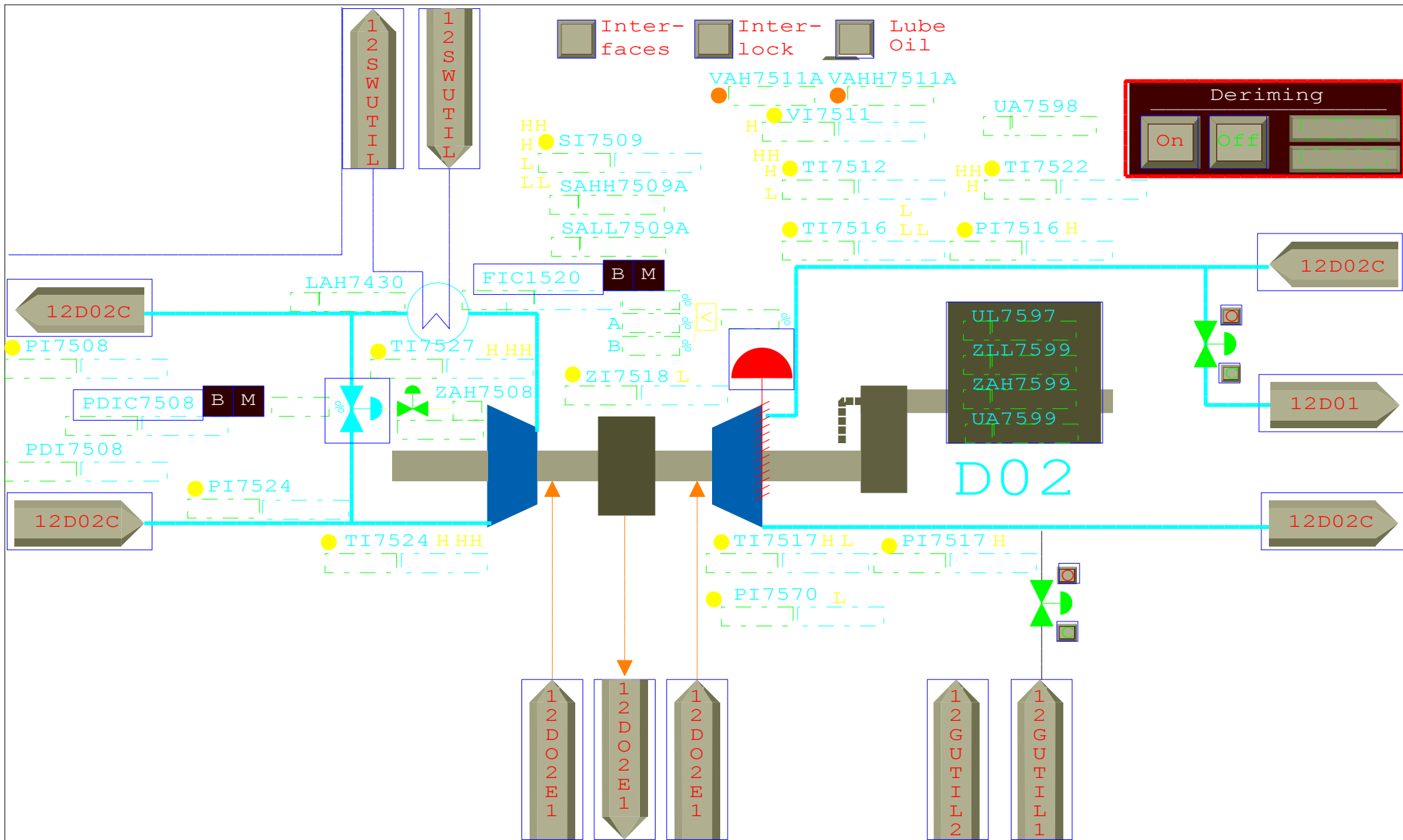
MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS



S Current

A
B
C
D

- MENU
- Air Compr.
- Booster Compr.
- Nitrogen Compr.
- Main H. Exch.
- LIN/LOX LAR Storage
- I/F&I/C Utility
- O2 / N2 Column
- Argon Rectif.
- TRENDS



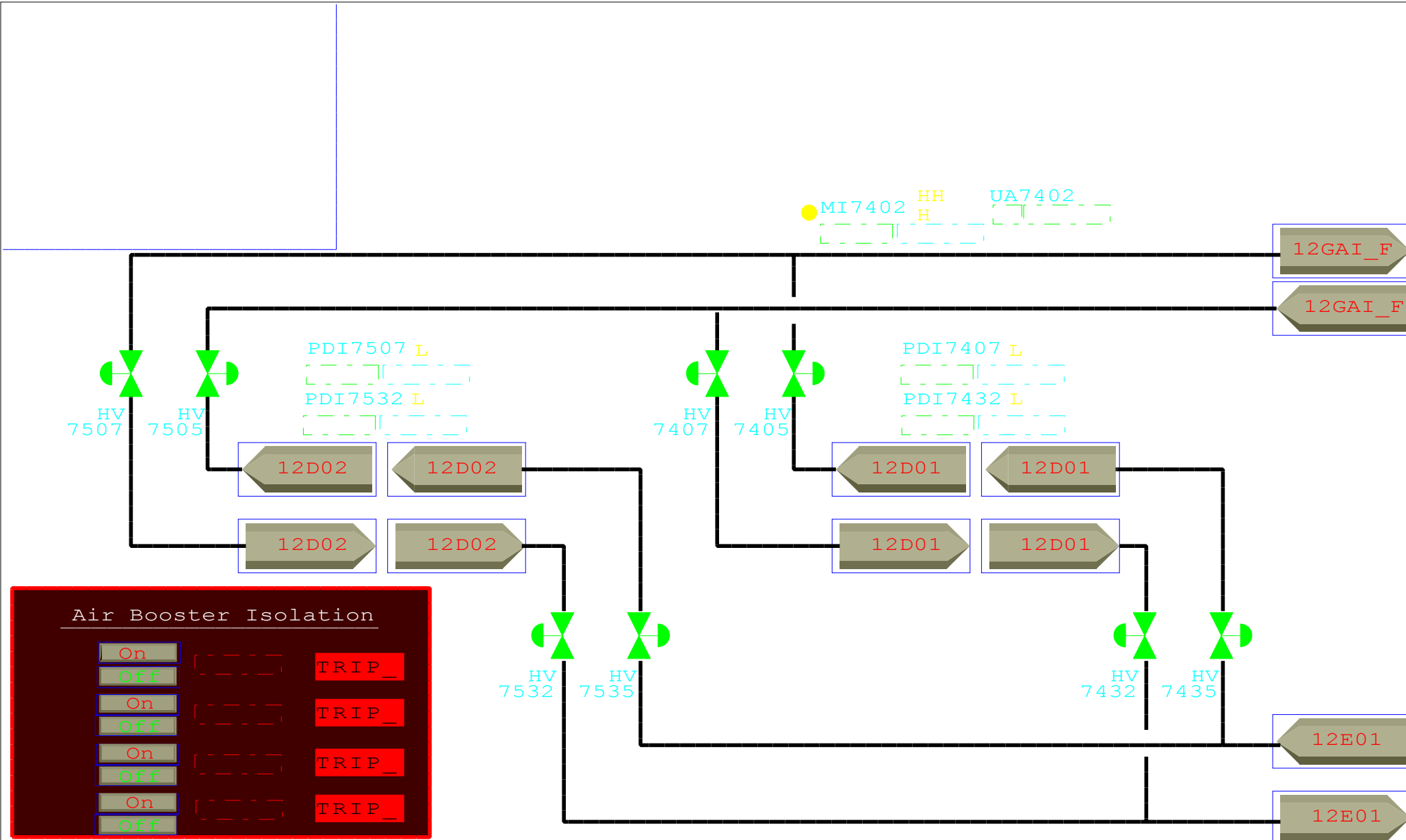
S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Date Printed: Monday, March 22, 2004 at 9:14:00 PM

Date Last Modified: Thursday, March 18, 2004 at 10:10:00 PM



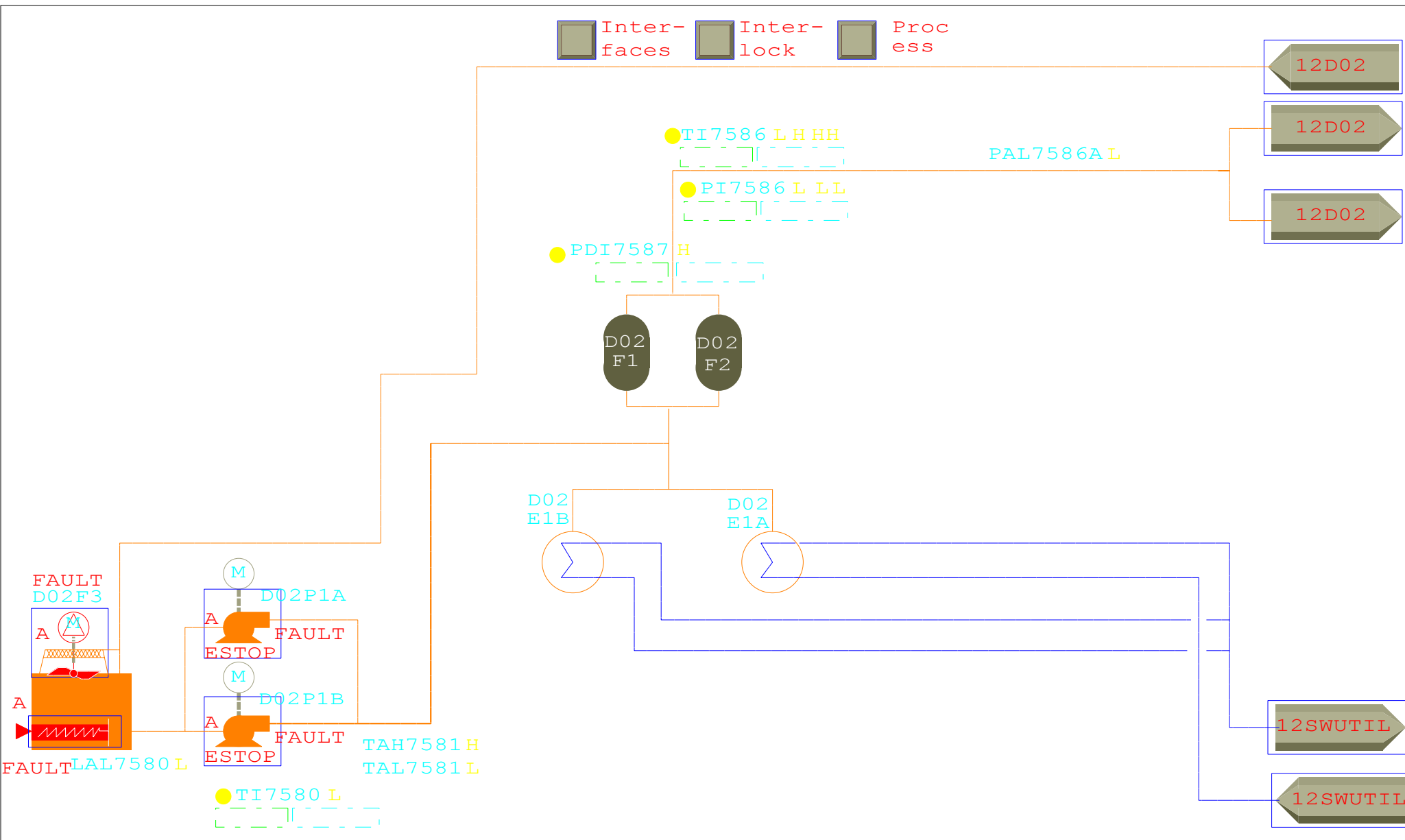
Air Booster Isolation

On		TRIP_
Off		TRIP_
On		TRIP_
Off		TRIP_
On		TRIP_
Off		TRIP_

S
A
B
C
D

Current

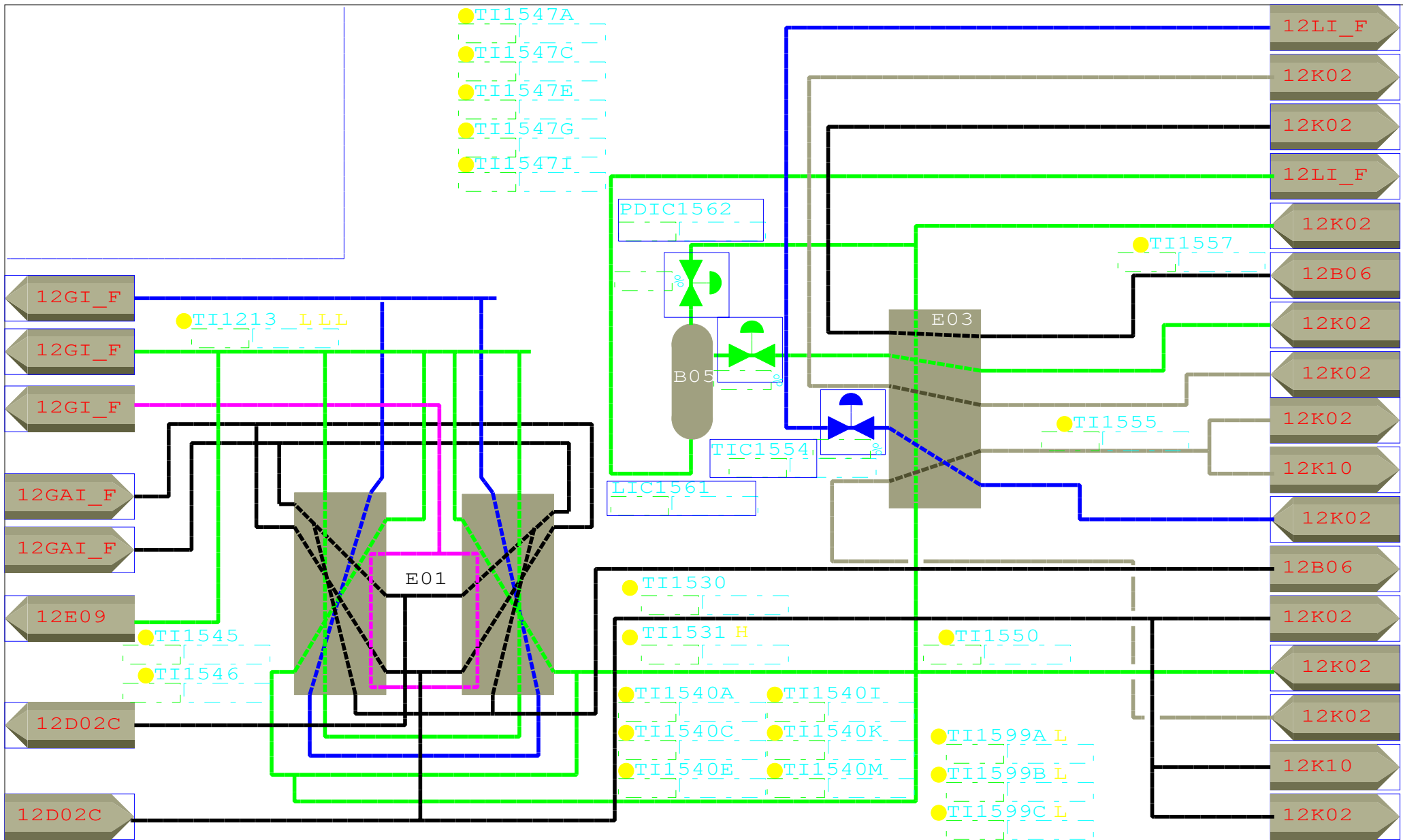
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
 A
 B
 C
 D

Current

MENU	Air Compr.	Booster Compr.	Nitrogen Compr.	Main H. Exch.	LIN/LOX LAR Storage	I/F&I/C Utility	O2 / N2 Column	Argon Rectif.	TRENDS
------	------------	----------------	-----------------	---------------	---------------------	-----------------	----------------	---------------	--------

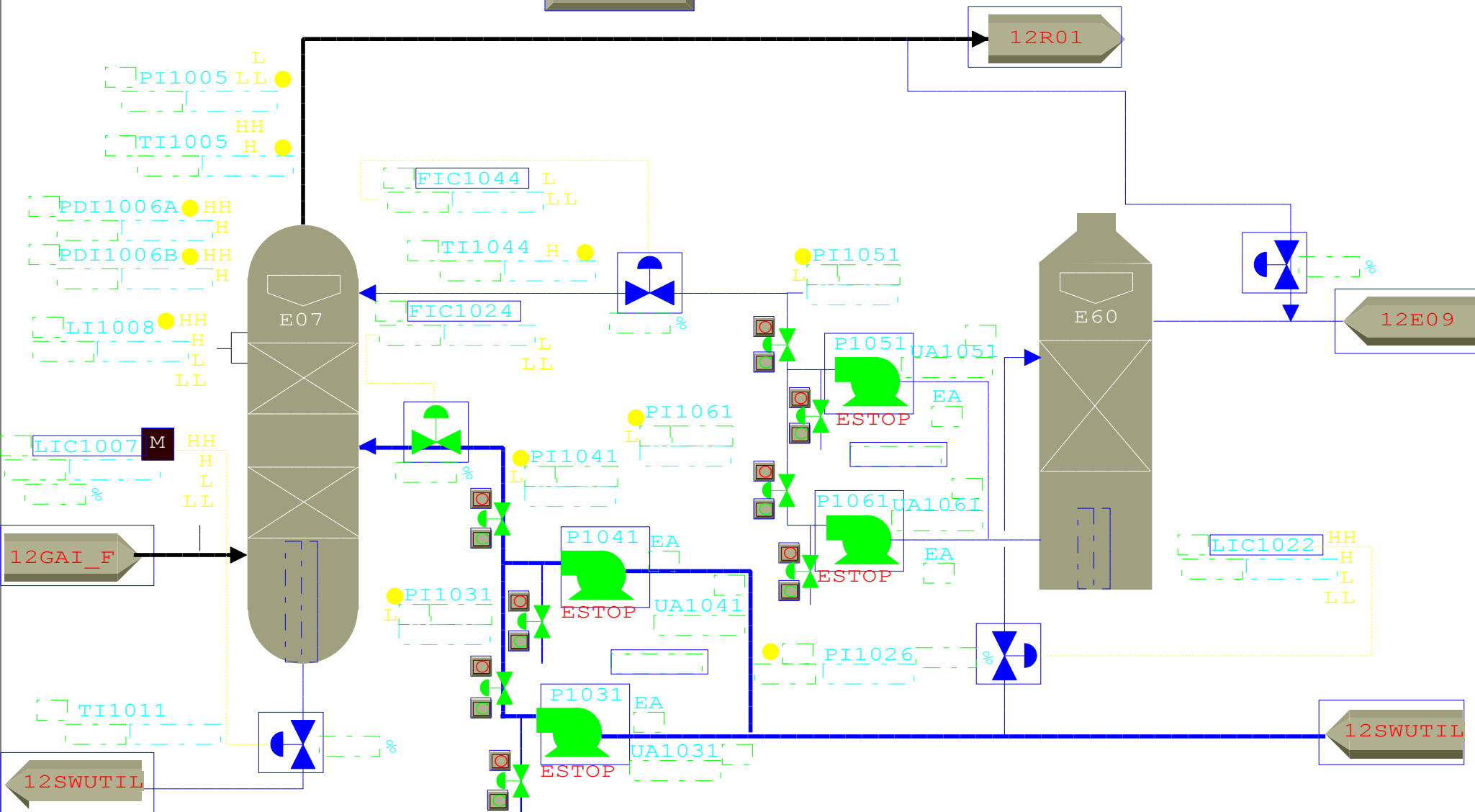


Current

S
A
B
C
D

MENU	Air Compr.	Booster Compr.	Nitrogen Compr.	Main H. Exch.	LIN/LOX LAR Storage	I/F&I/C Utility	O2 / N2 Column	Argon Rectif.	TRENDS
------	------------	----------------	-----------------	---------------	---------------------	-----------------	----------------	---------------	--------

ASU
START UP



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

Date Printed: Monday, March 22, 2004 at 9:52:56 PM

Date Last Modified: Thursday, March 18, 2004 at 1:10:10 PM

Start up Conditions

READY TO
START

HL1000 SD

Alarm Conditions

PAL1005

TAH1005

PDAH1006A

PDAH1006B

LAH1007

LAL1007

MANUAL TRIP

LAH1008

LAL1008

Trip Conditions

Bypass

PALL1005

EA7099C

TAHH1005

PDAHH1006A

PDAHH1006B

LAHH1007

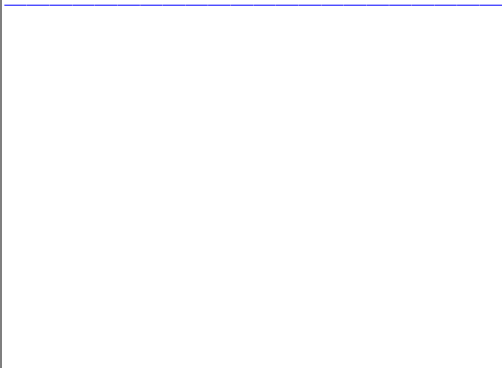
LALL1007

HSL1000

LAHH1008

LALL1008

First
Out



E07/E60 RESET MANUAL TRIP

S

Current

A

B

C

D

MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS

Start up Conditions

READY TO
START

HL1000 SD

Alarm Conditions

PAL1005
TAH1005
PDAH1006A
PDAH1006B
LAH1007
LAL1007
MANUAL TRIP
LAH1008
LAL1008

Trip Conditions

Bypass

PALL1005
EA7099C
TAHH1005
PDAHH1006A
PDAHH1006B
LAHH1007
LALL1007
HSL1000
LAHH1008
LALL1008

First
Out

●
●
●
●
●
●
●
●
●
●

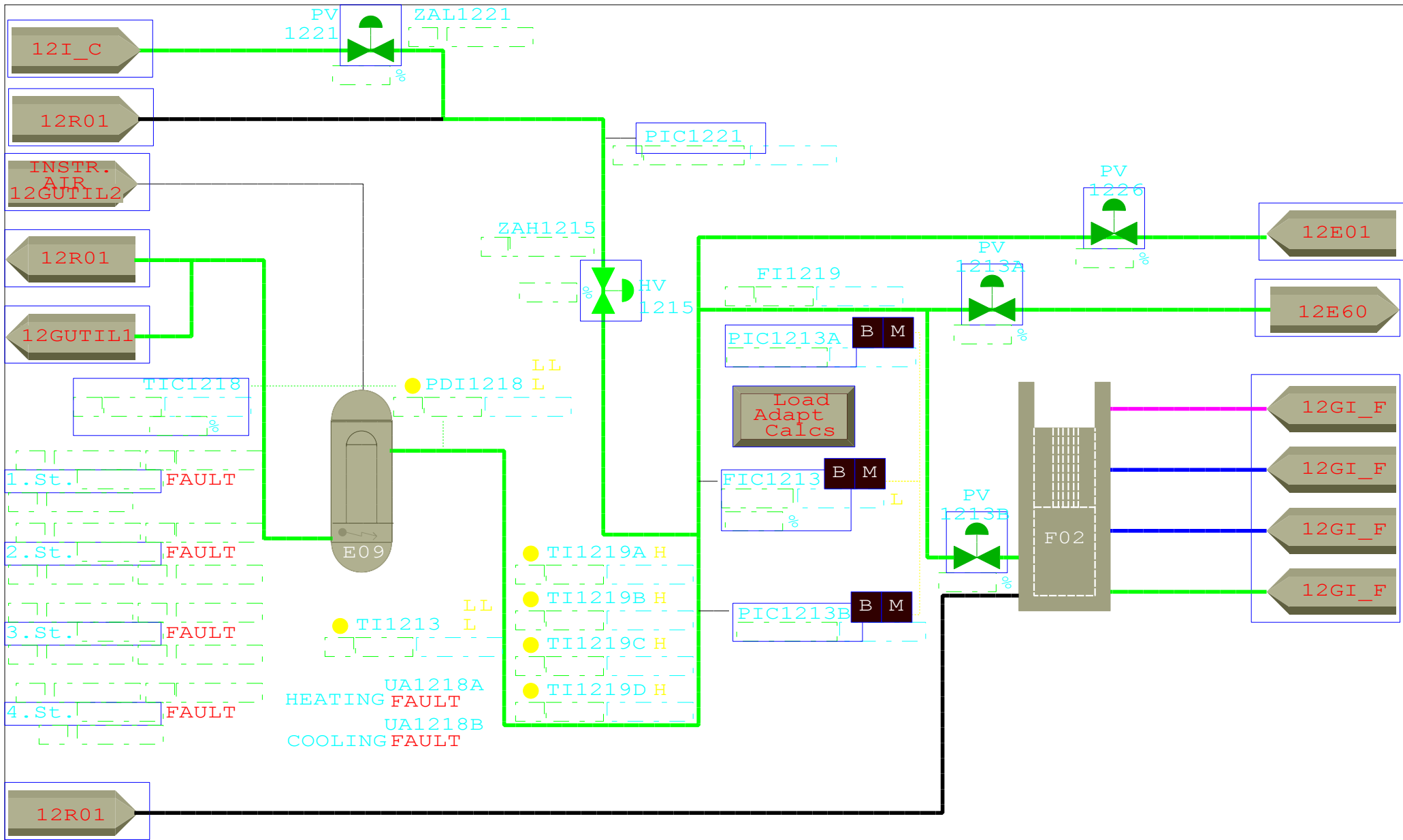


E07/E60 RESET MANUAL TRIP

S
A
B
C
D

Current

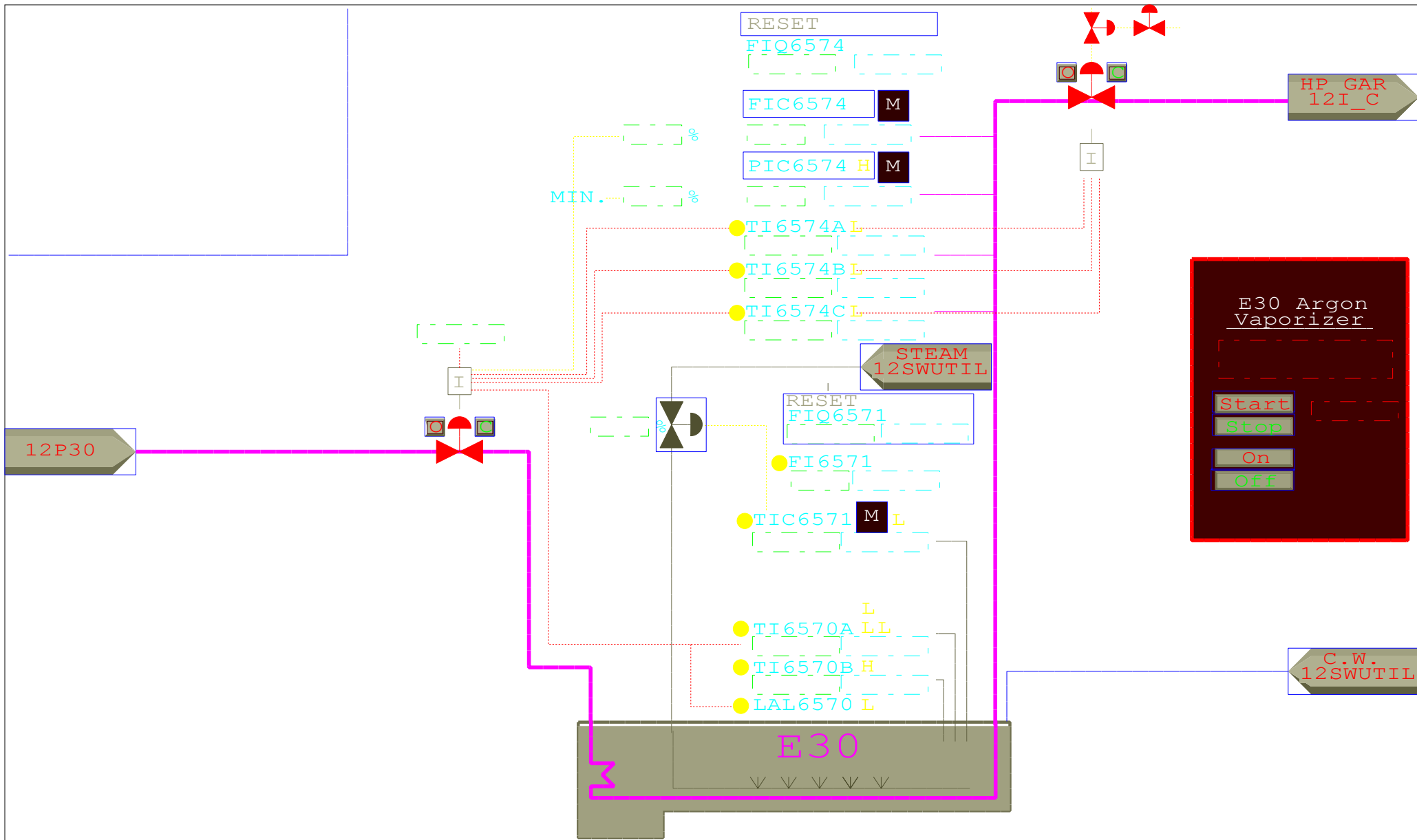
MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS



S
A
B
C
D

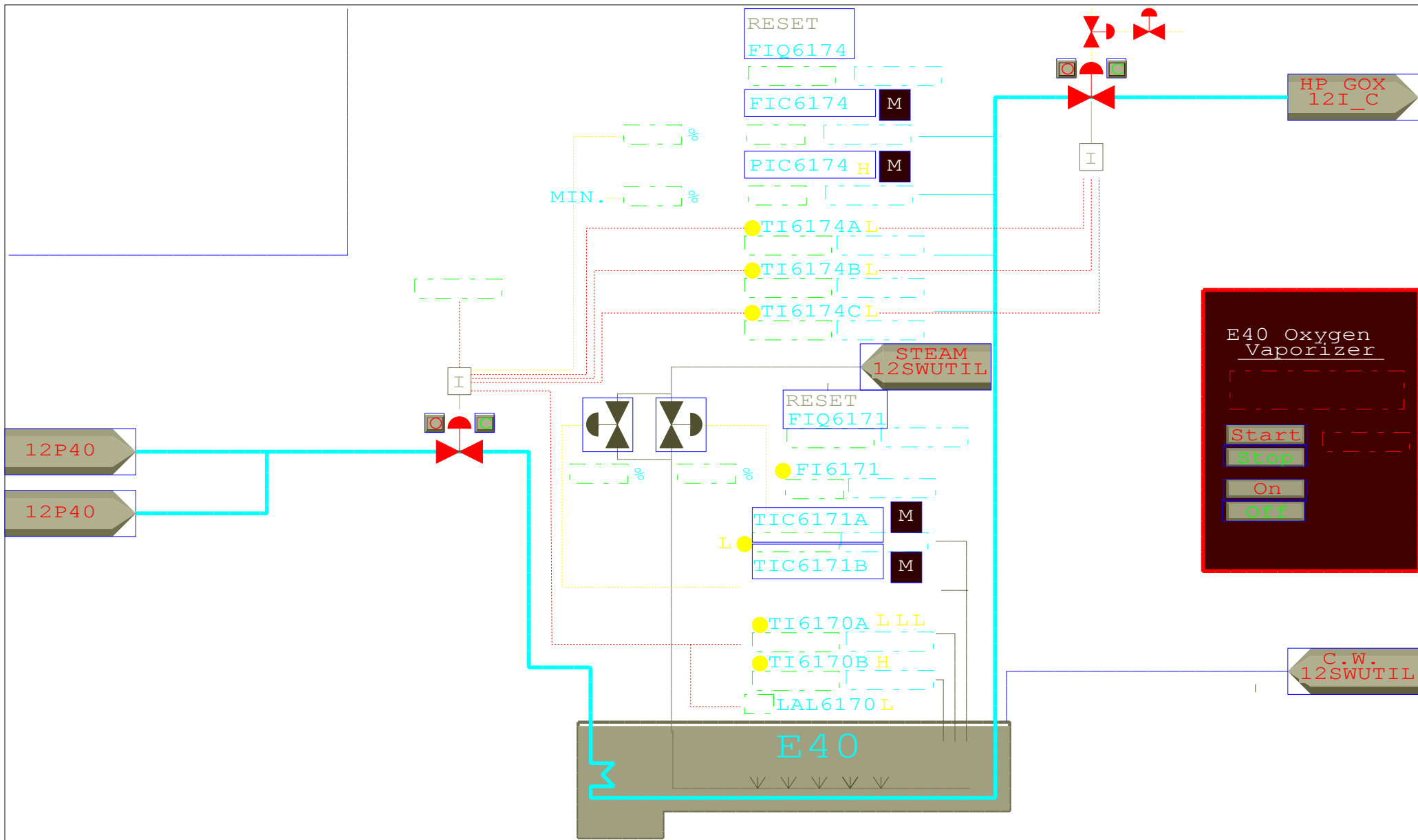
Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

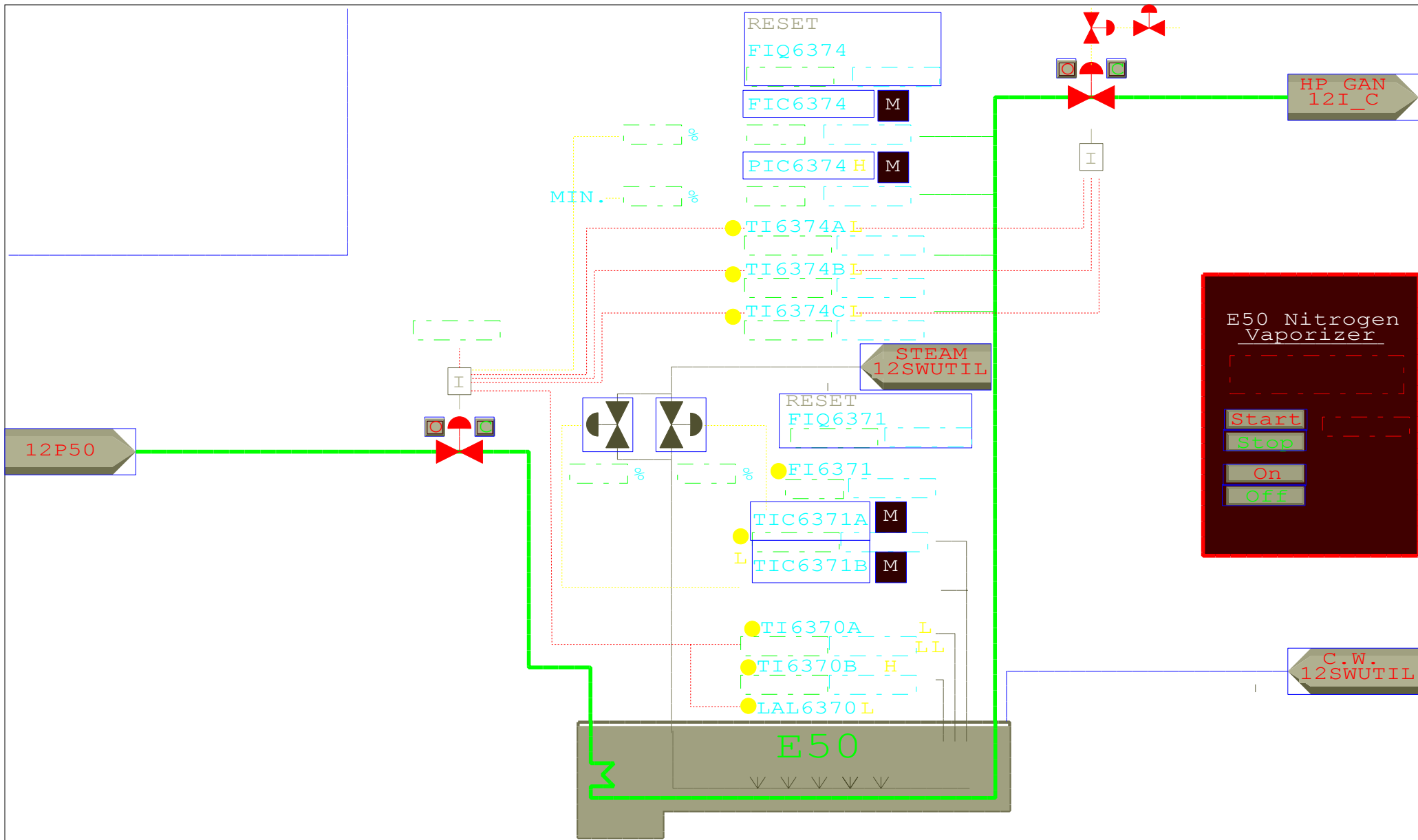
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

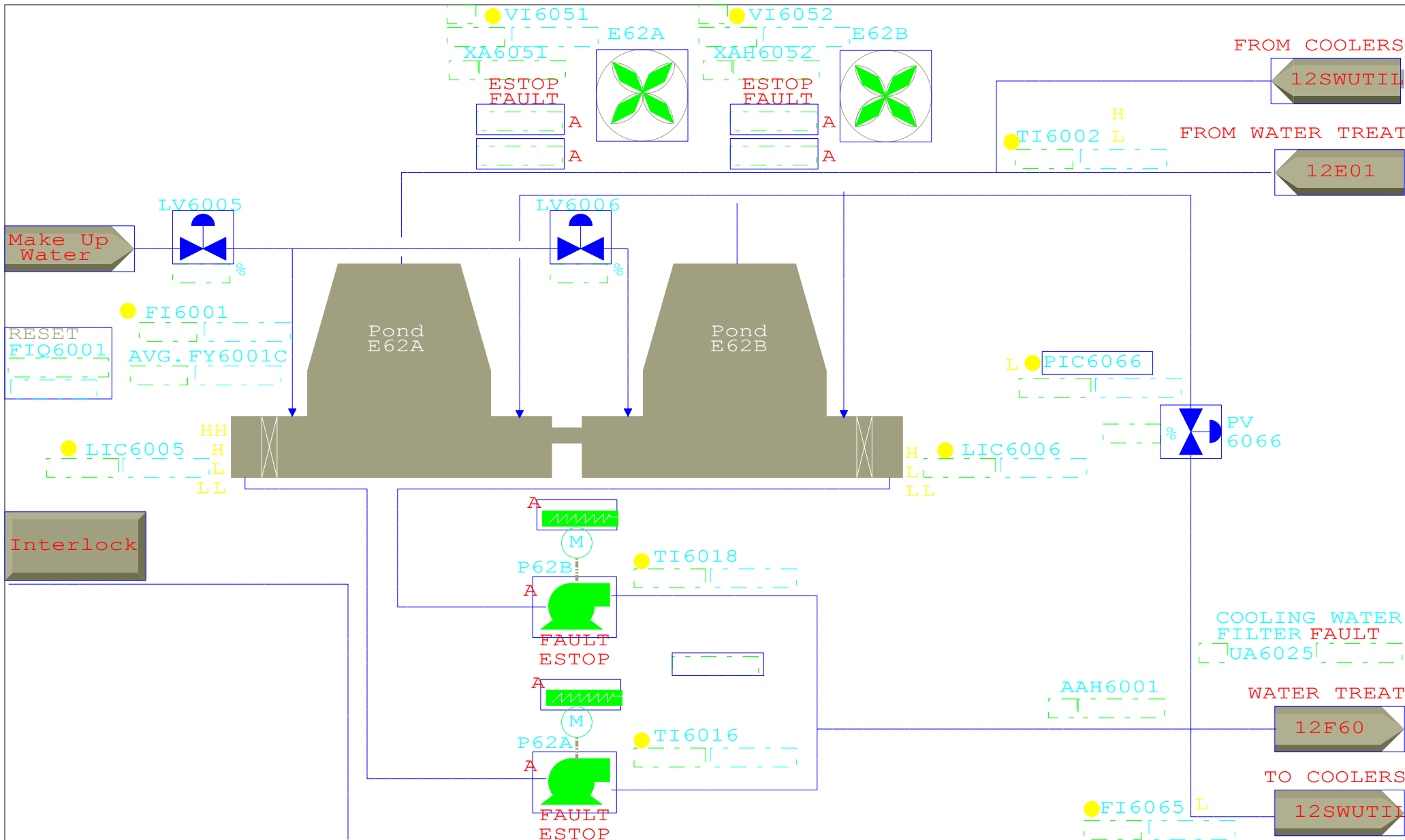
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S

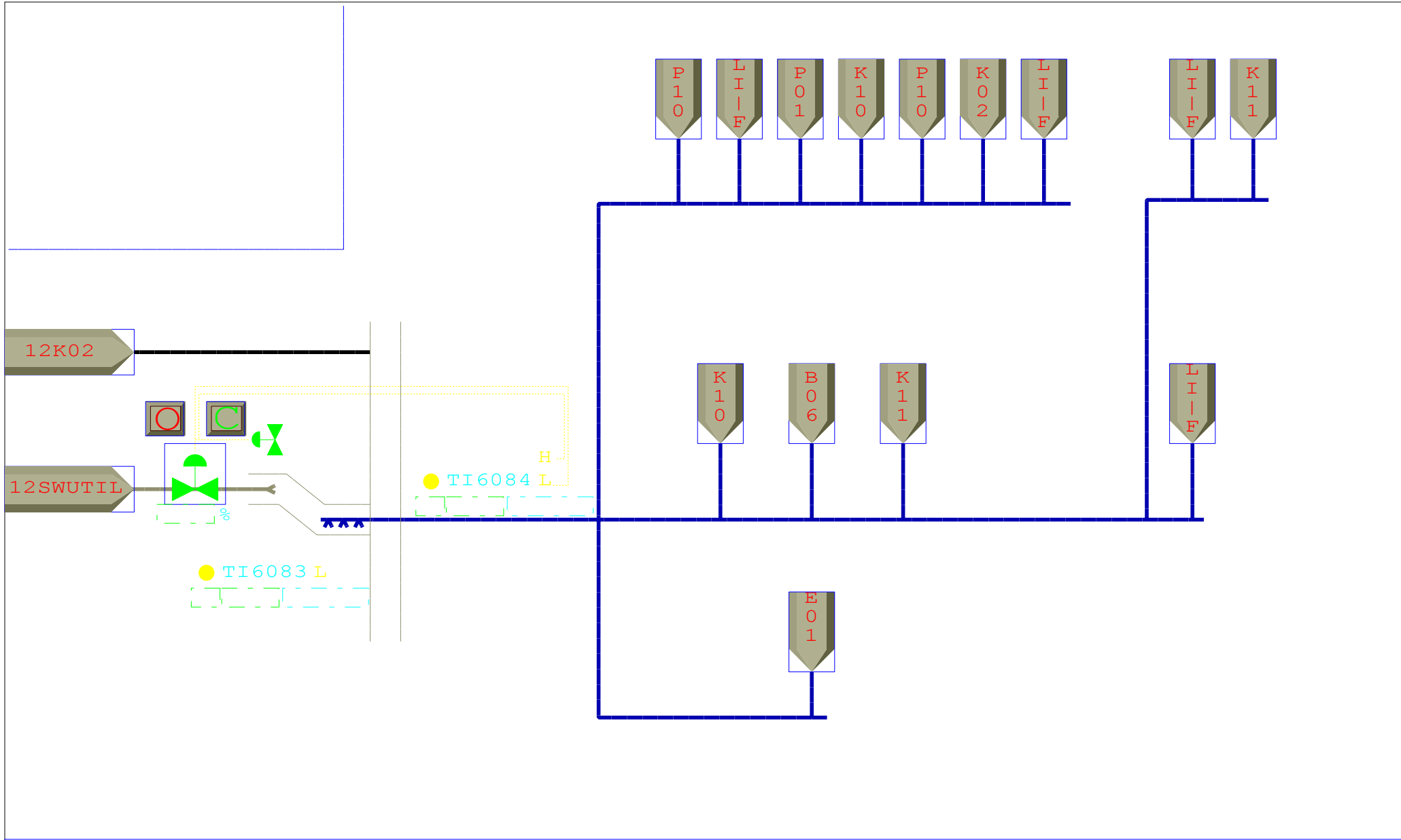
A

B

C

D

MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS



S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

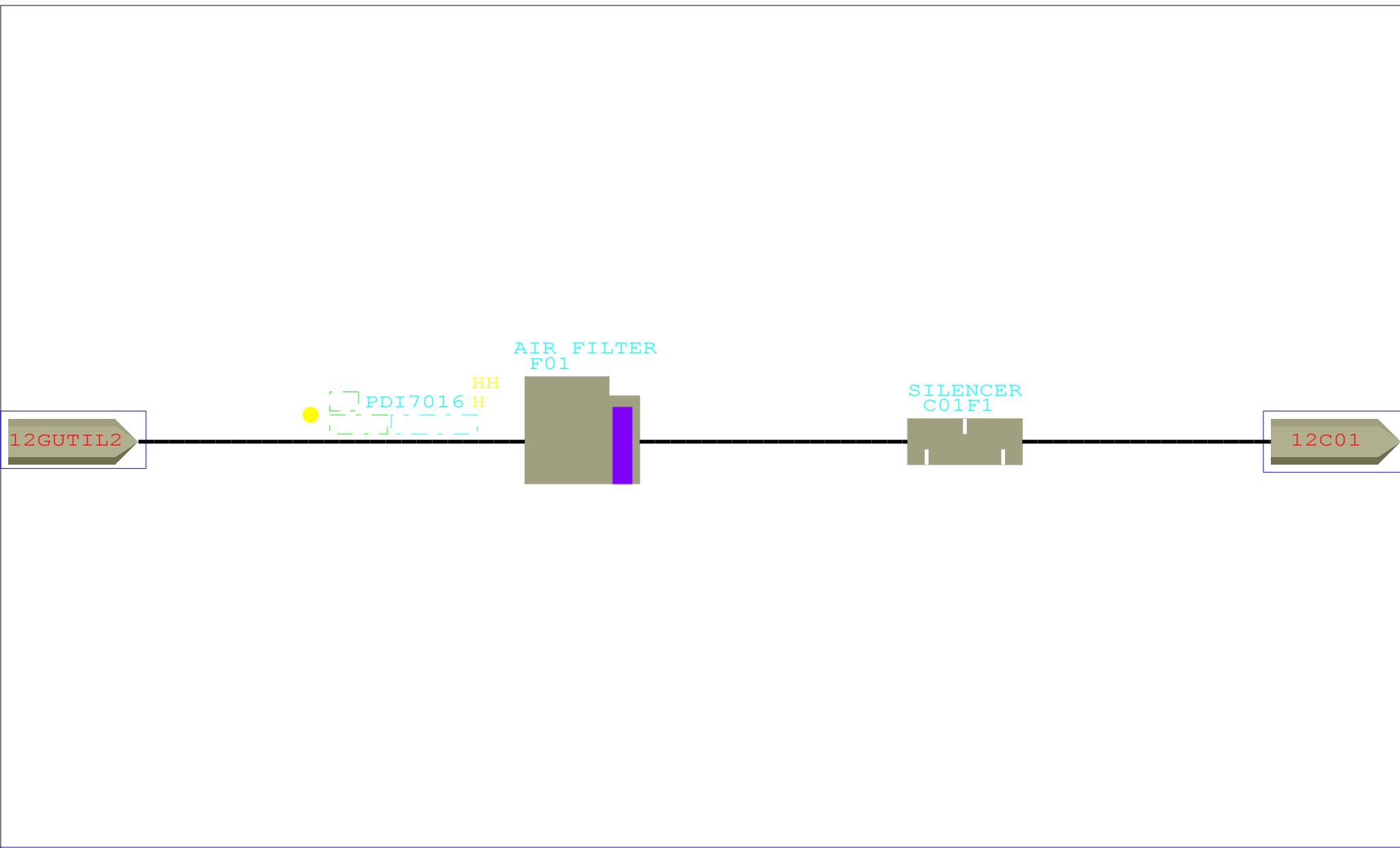
Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

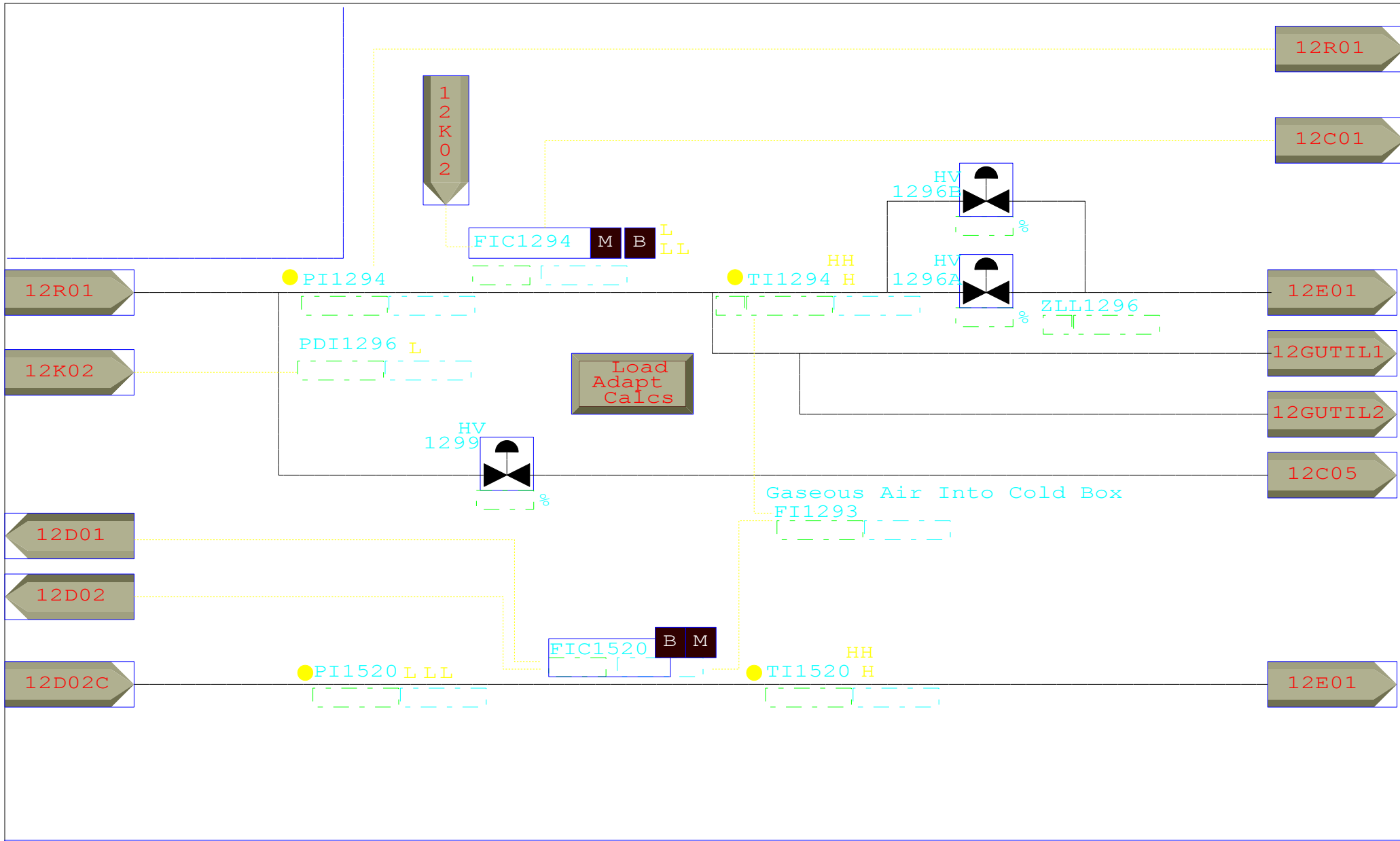
TRENDS



S
A
B
C
D

Current

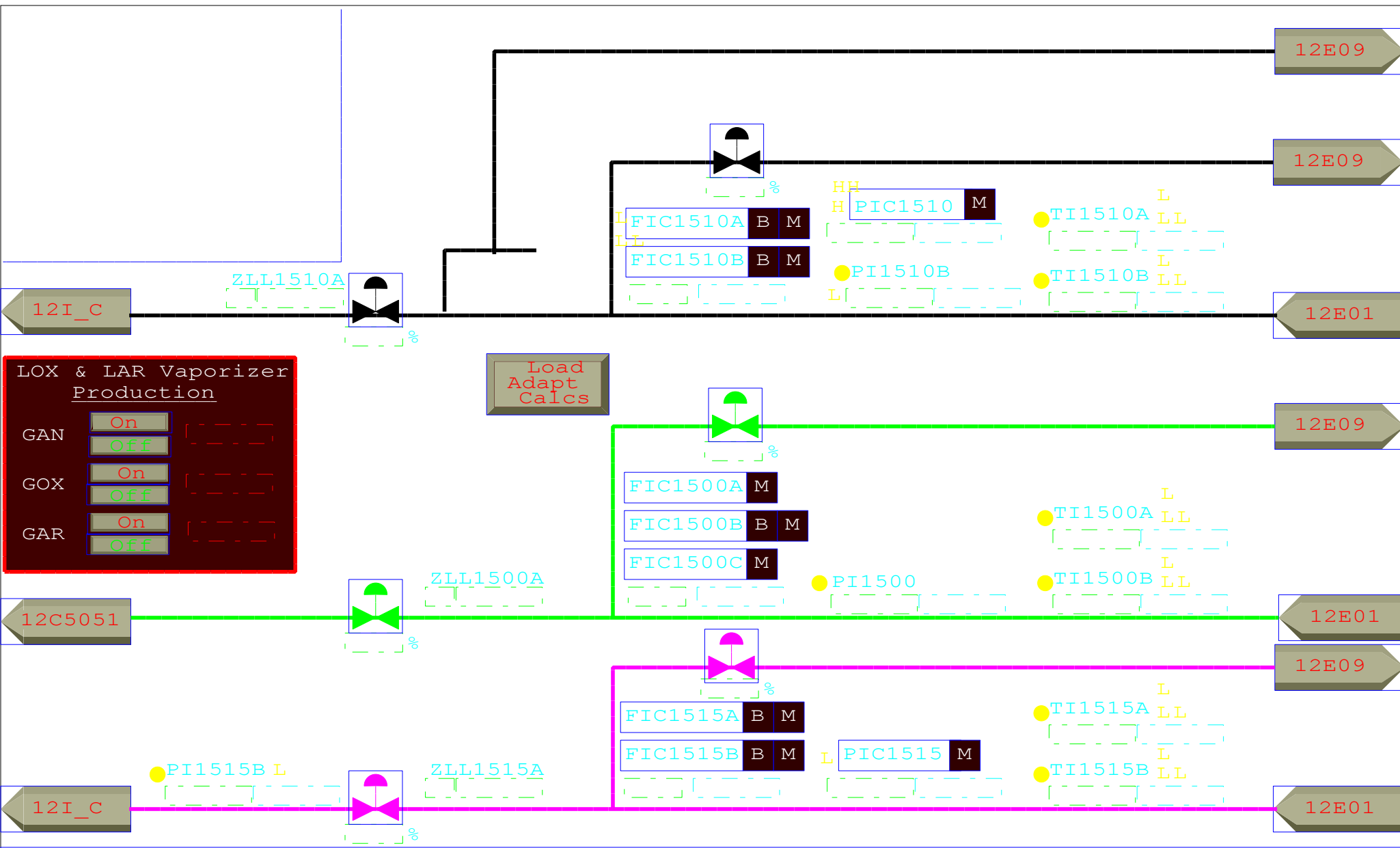
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

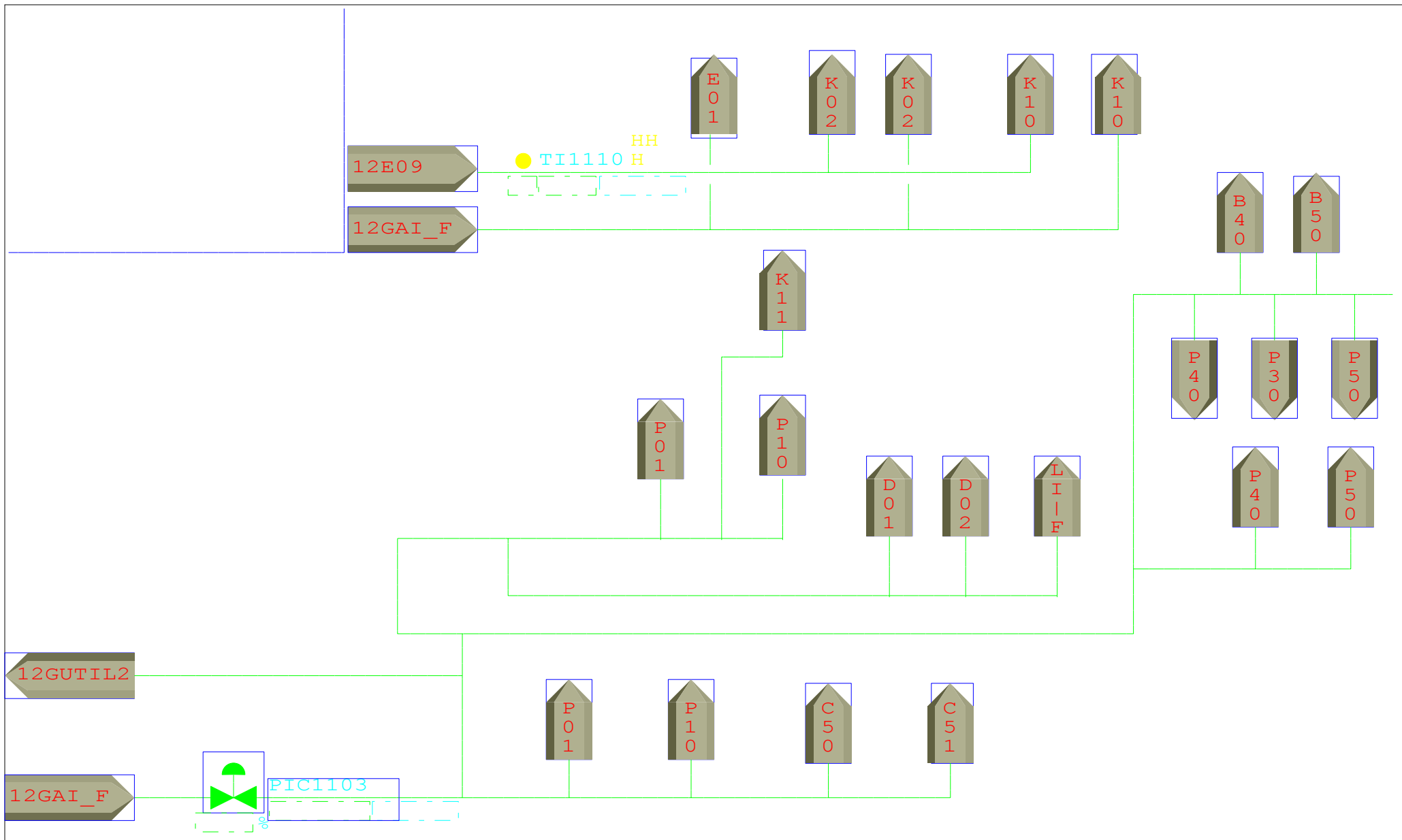
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

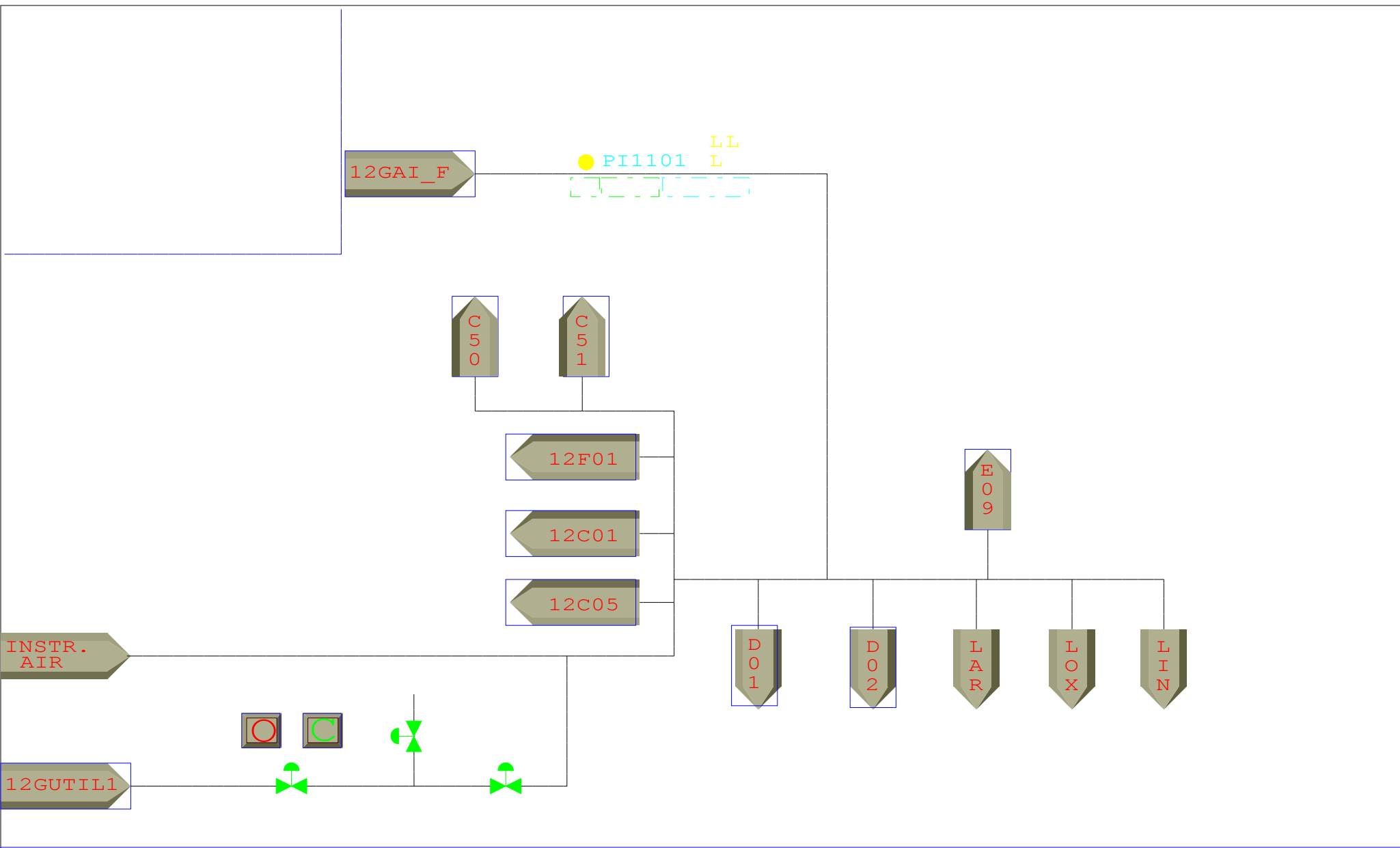
MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS



S
A
B
C
D

Current

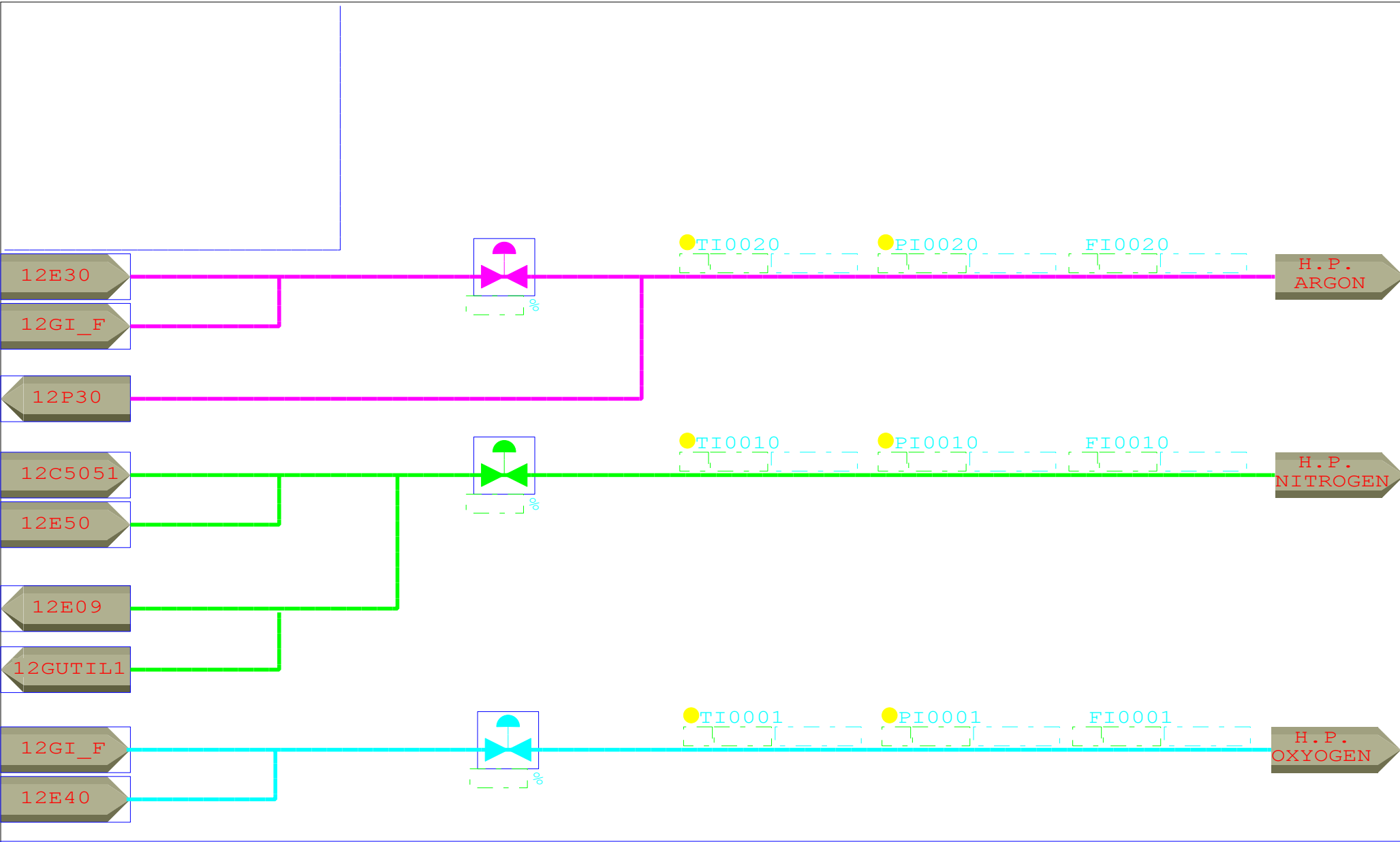
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
 A
 B
 C
 D

Current

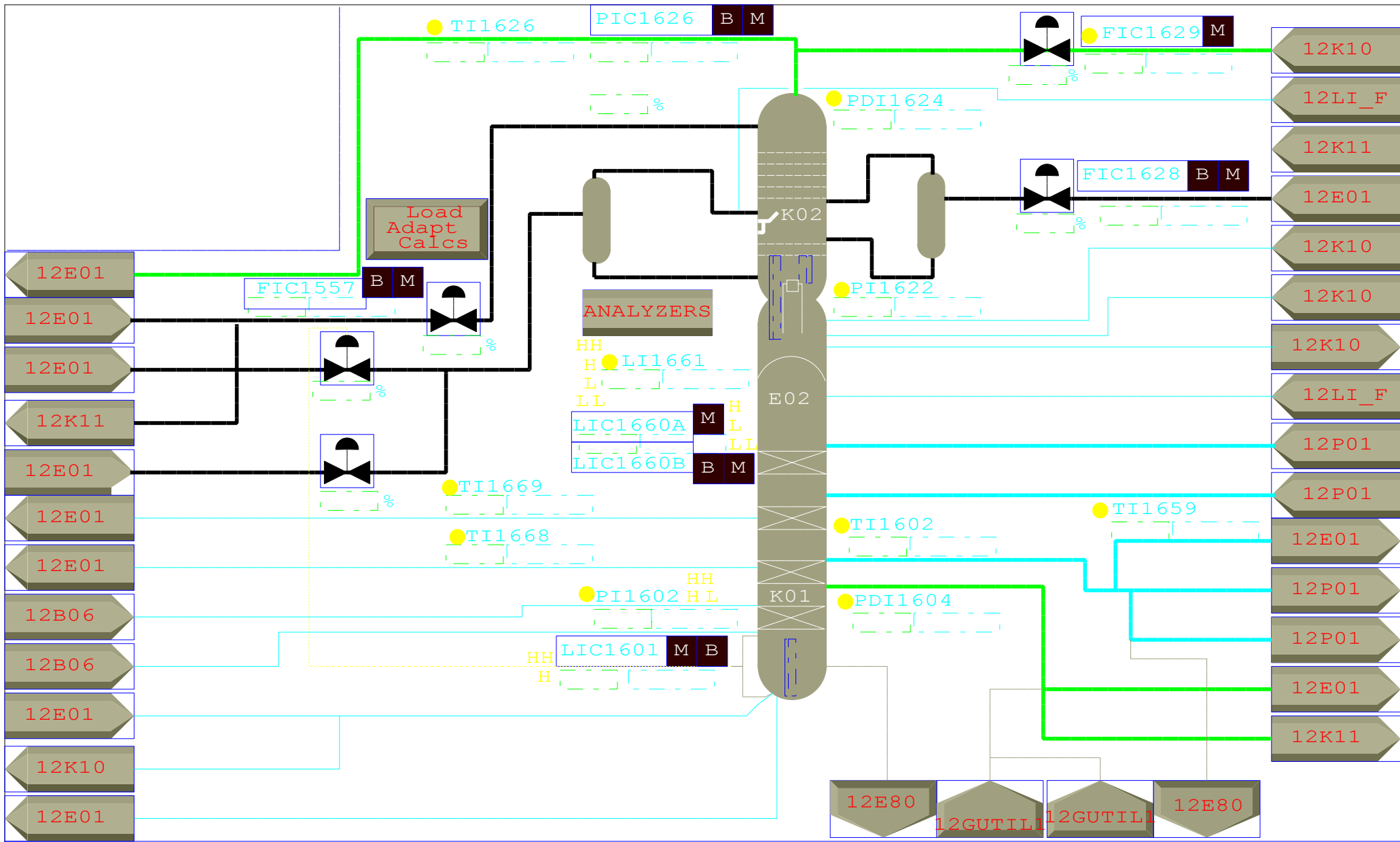
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

●AI1724HHH
 A [] D []
 B [] E []
 C [] F []
 AAHH1724A []
 AAHH1724C []
 FAL1724 []
 UA1724 []
 HL1724 []

●AI1680HHH

●AI1681LLL

●AI1682

●AI1683 HHH

●AI1689AHHH

AIC1716 M

●AI1689BHHH

A []
 B []
 C []

A []
 B []
 C []
 D []
 E []

A []
 B []

A []
 B []
 C []
 D []

A []
 B []
 C []

FAL1680 []
 UAY1680 []
 UA1680 []
 HL1680 []

FAL1681 []
 UA1681 []
 HL1681 []

FAL1682 []
 UA1682 []
 HL1682 []

FAL1683 []
 UA1683 []
 HL1683 []

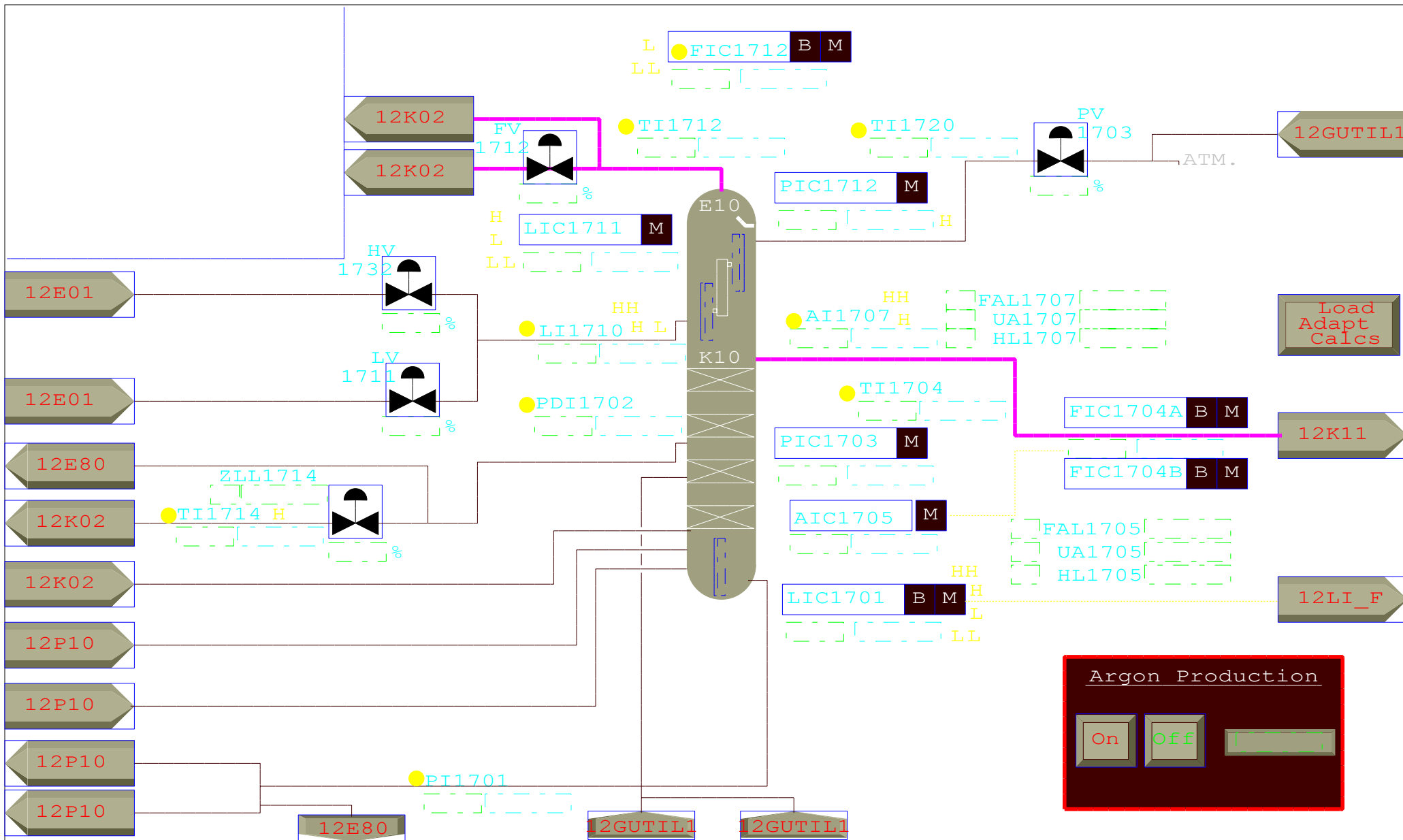
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 UA1689A []
 HA1689 []

FAL1716 []
 UA1716 []
 HA1716 []
 HL1716 []

S
 A
 B
 C
 D

Current

MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS

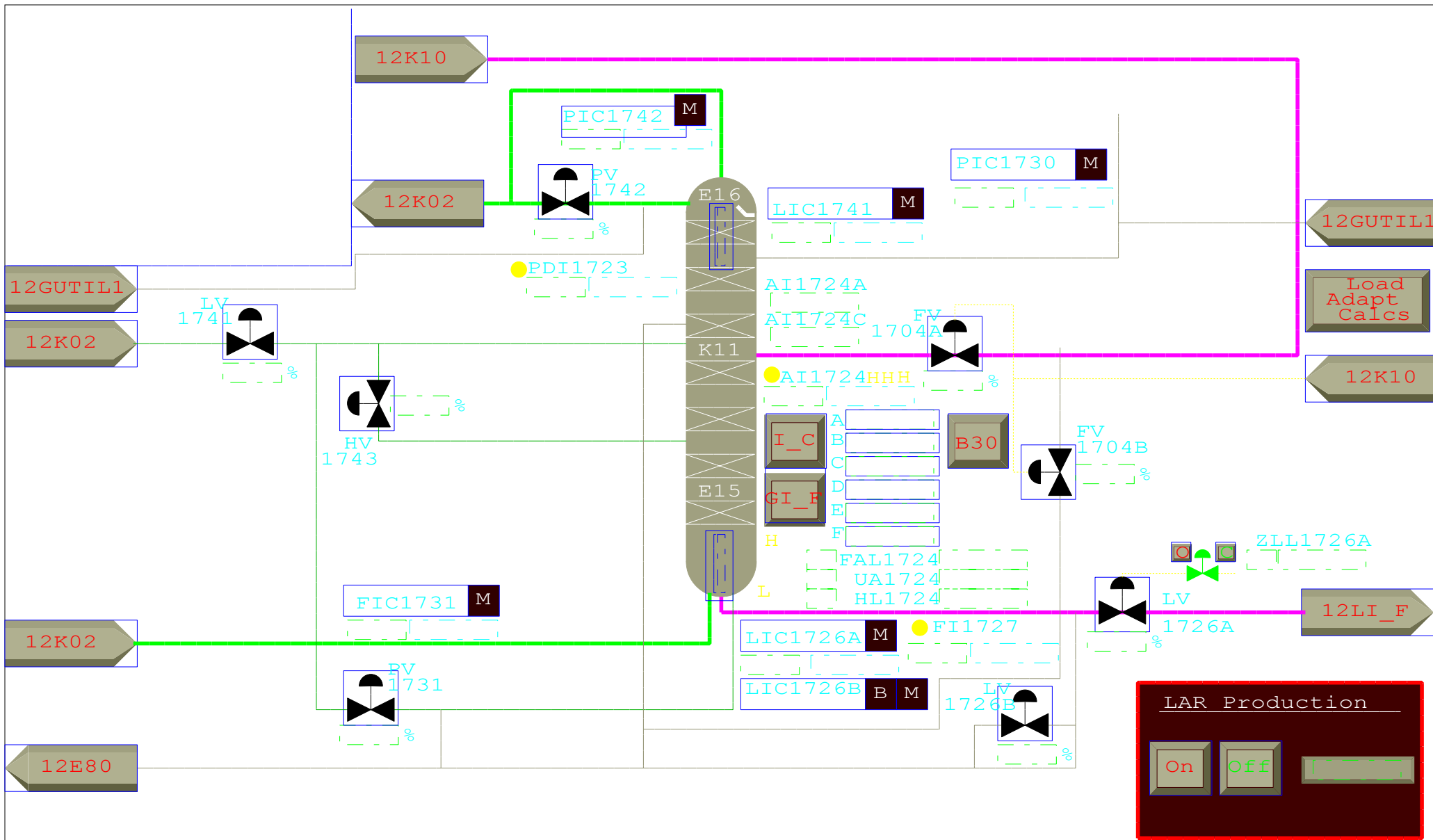


Argon Production

S
A
B
C
D

Current

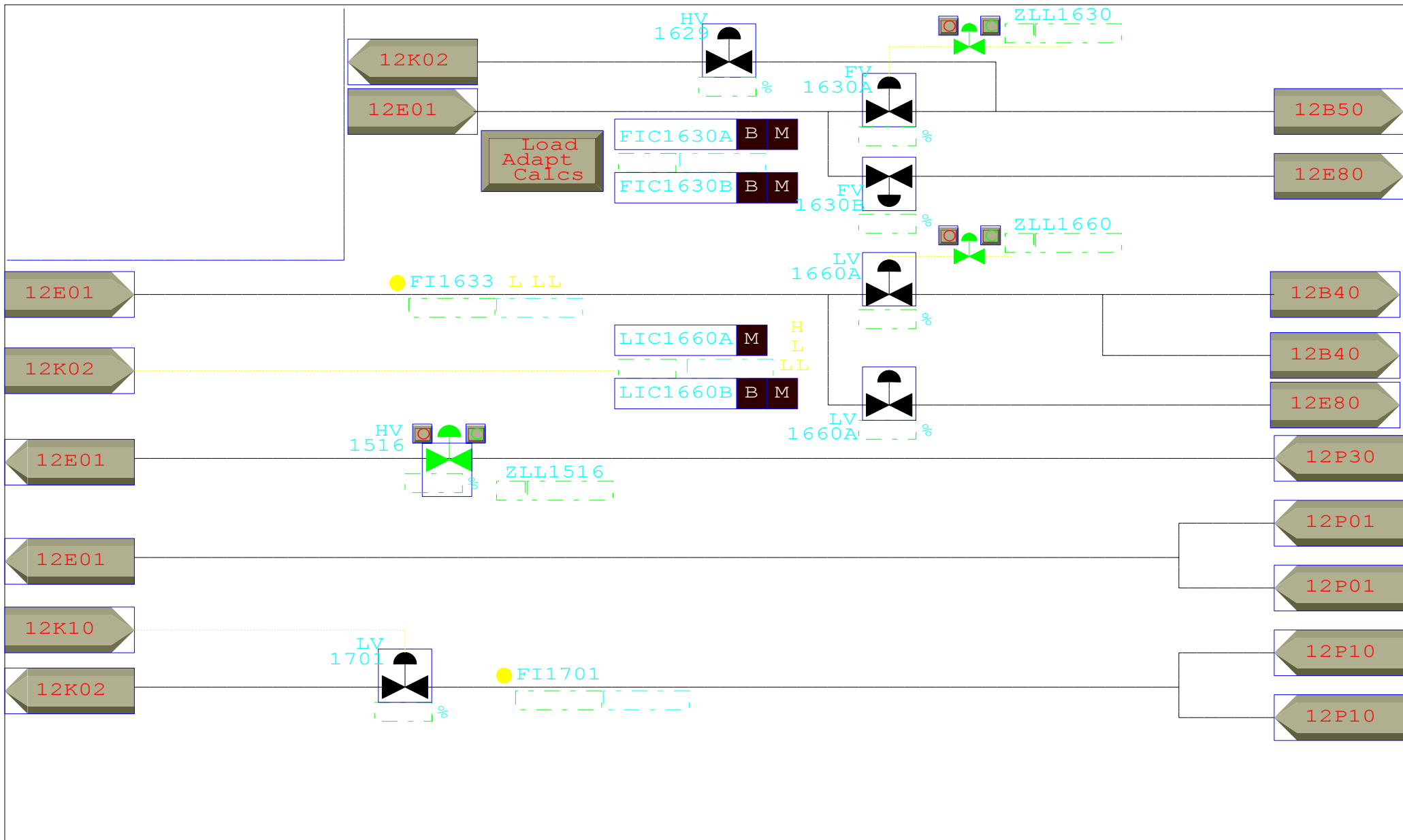
- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



Current

S
A
B
C
D

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS



S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

Plant #12 - Overview Operating Screens #1

Gas- Compression	C01 AirCompr.	C05 Air Booster	C50 N2-Compr.	C51 N2-Compr.		
Storage & Vaporizers	B30 LAR Storage	B40 LOX Storage	B50 LIN Storage	E30 LAR Vaporizer	E40 LOX Vaporizer	E50 LIN Vaporizer
Air Cooling	E07 Air Water Tower		R01 Air Purif.Unit	E09 Elect. React.Htr		
O2 / N2 - Separation	E01 Exchangers	K02 N2/O2 Dist.	D02C Expanders	P01A/B LOX-Pumps	P40A/B LOX-Pumps	P50A/B LIN-Pumps
Argon - Recovery	12K10 AR-Crude	12K11 AR-Recti.	P30A/B LAR-Pump	P10A/B Crude Argon		
Backup - Systems	E62 Cool.Twr	E80 Cryogenic Wastes	GOX/GAN/GAR InterConn.	Liquid LOX/LIN/LAR Interfaces	Gaseous Air Interfaces	Gaseous GOX/GAN/GAR Interfaces
Cool.Water- Utilities	Steam & Water	#1 Gas Utilities	#2 Gas Utilities	Load Adaptation Calculations	A L C Operate	A L C Control

ALC- Program

Startup and Operation infos of Molsieve

Initial startup: The complete molecular sieve has to be pressureless
and the MS-Sequencer in "MAN"

1. HS1281C has to be set to "RELEASE"
 2. HS1281D has to be activated "SINGLE STEP"
- > the MS-sequencer changed to 1. step (PRP DEPR)

Operation: The MS-Sequencer can be operate in AUTO- or MAN-mode.
AUTO-mode --> switching through steps with timing and
switch conditions. Switching to AUTO by activating
HS1281C"RELEASE" first and then HS1281A "AUTO/MAN".
MAN-mode --> switching through the steps by activating
HS1281C "RELEASE" first and then HS1281D"SGLSTP".
switching can only be done with fulfilled conditions.
"READY" will be displayed (black on green)

Interlocks:

- PLANT SHUTDOWN (US1000) will stop MS-sequencer
- temperatures not low in COOLING (TAHH1227,TAHH1228)
- monitoring time exceeded, are controlled in each STEP
- electr. heater E09 STOP in heating step (4,13)

Alarms:

- <DEPR.,PR. SLOW> depressurizing/pressurizing too slow
- <DEPR.,PR. FAST> depressurizing/pressurizing too fast
- <NOPEAK> no molsieve temperatures peak
- regeneration temperatures TAL1218/TAH1219
- regeneration flow too low(FAL1213) in HEATING
- regeneration heater housing temperature too high(TAH1218)

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

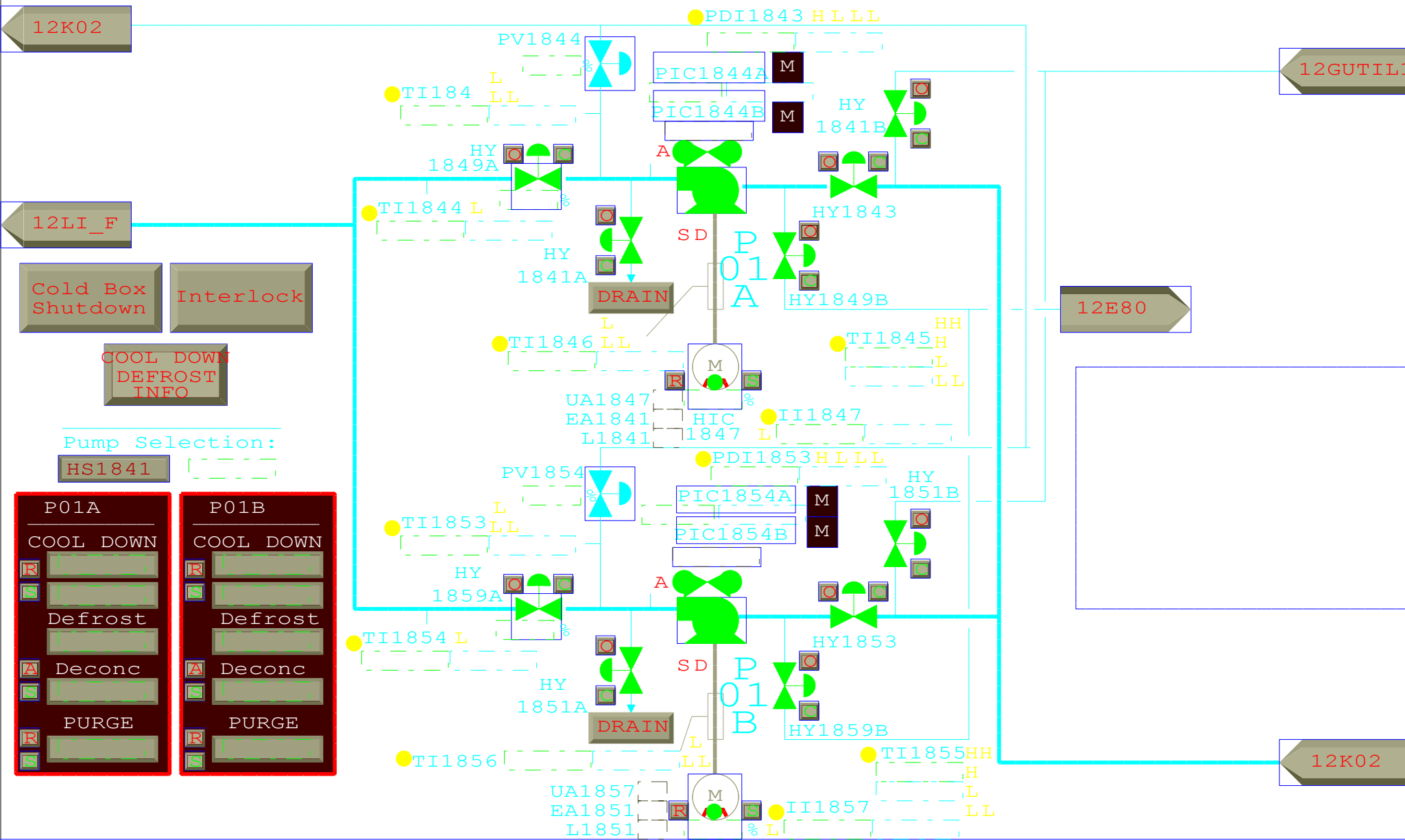
Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS



Cold Box Shutdown Interlock

COOL DOWN
DEFROST
INFO

Pump Selection:

HS1841

P01A

COOL DOWN

Defrost

Deconc

PURGE

P01B

COOL DOWN

Defrost

Deconc

PURGE

S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

P01A - INTERLOCKING

HL1295		
LALL1660		
HL1510A		
TALL1846		
TALL1843		
TAHH1845		
TALL1845		
PDALL1843		
EA1841C		
HA1841		
IAL1847		
L1841O		

P01A - PERMISSION

TAL1845		
---------	--	--

P01B - INTERLOCKING

HL1295		
LALL1660		
HL1510A		
TALL1856		
TALL1853		
TAHH1855		
TALL1855		
PDALL1853		
EA1851C		
HA1851		
IAL1857		
L1851O		

P01B - PERMISSION

TAL1855		
---------	--	--

P01

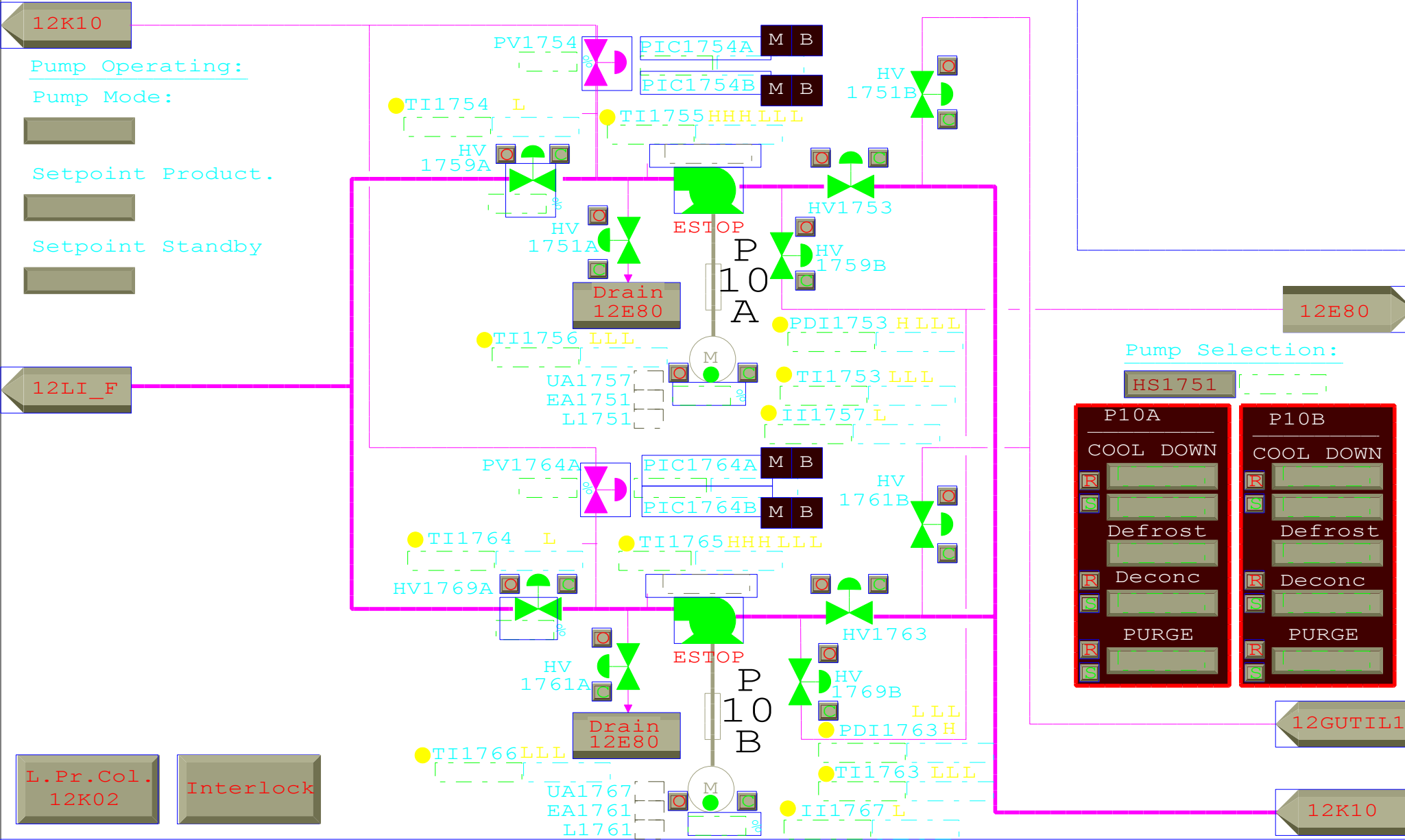
COOL DOWN
DEFROST
INFO

COLD BOX
SHUTDOWN

Current

S
A
B
C
D

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------



Pump Operating:
 Pump Mode:
 Setpoint Product.
 Setpoint Standby

Pump Selection:

HS1751

P10A		P10B	
COOL DOWN	[R]	COOL DOWN	[R]
Defrost	[S]	Defrost	[S]
Deconc	[R]	Deconc	[R]
PURGE	[S]	PURGE	[S]

L.Pr.Col. 12K02 Interlock

S
A
B
C
D

Current

MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS

P10A - INTERLOCKING

PUMP BACKUP
SELECTOR

P10B - INTERLOCKING

HL1295
 LAHH1701
 LALL1701
 LAHH1710
 LALL1711
 TALL1756
 TALL1753
 TAHH1755
 TALL1755
 PDALL1753
 EL1757
 HA1751
 IAL1757
 L1761O

P10A - PERMISSION

TAL1755

HL1295
 LAHH1701
 LALL1701
 LAHH1710
 LALL1711
 TALL1766
 TALL1763
 TAHH1765
 TALL1765
 PDALL1763
 EL1767
 HA1761
 IAL1767
 L1751O

P10B - PERMISSION

TAL1765

TRENDS

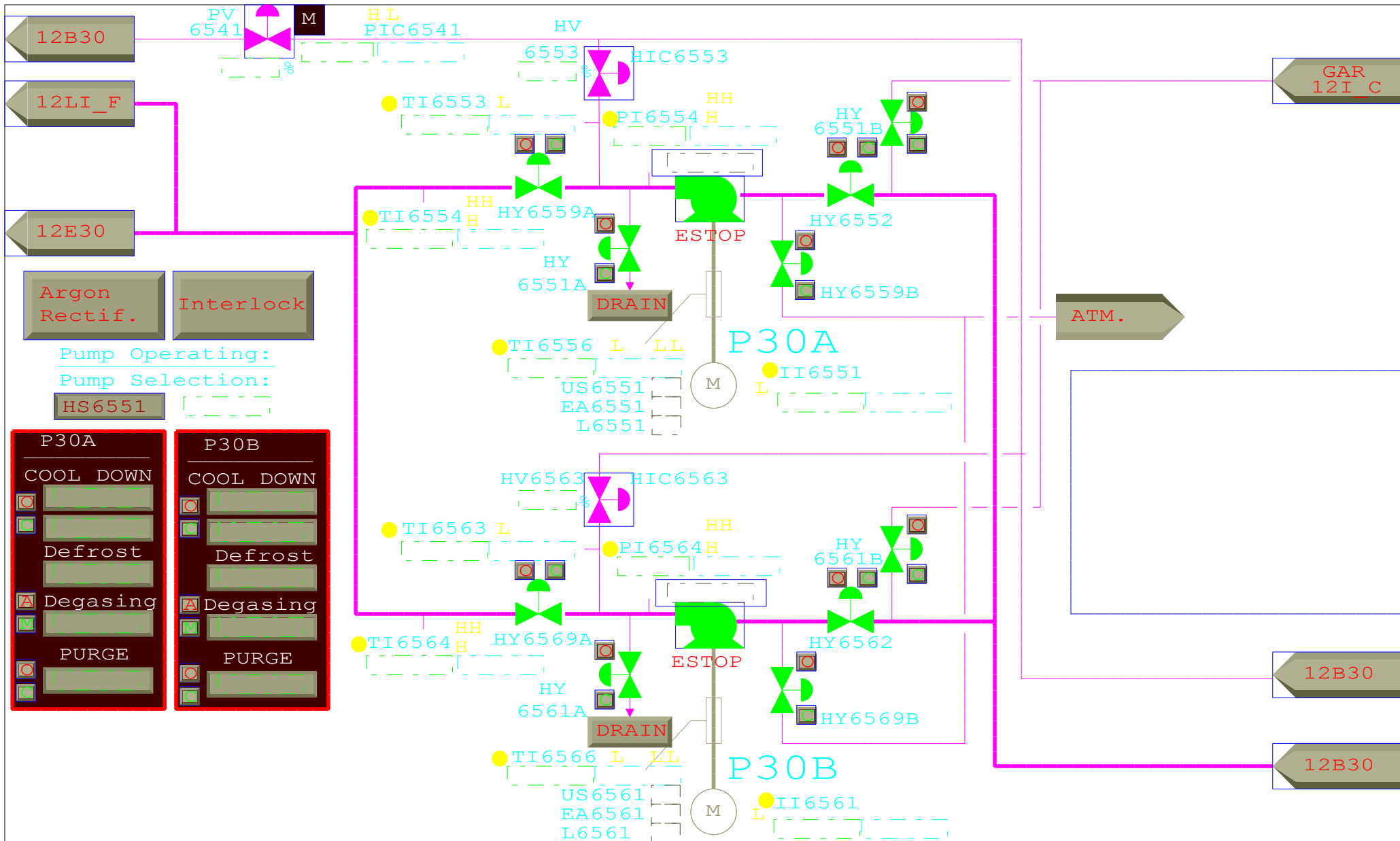
P10

COOL DOWN - DEFROSTING
INFO

Current

S
A
B
C
D

MENU Main Air Compr. Booster Turbine Nitrogen Compr. Main H. Exch. Booster Compr. Air Purif. Unit O2 / N2 Column Argon Rectif. TRENDS



Argon Rectif. Interlock

Pump Operating:
Pump Selection:

HS6551

P30A		P30B	
COOL DOWN	<input type="checkbox"/>	COOL DOWN	<input type="checkbox"/>
Defrost	<input type="checkbox"/>	Defrost	<input type="checkbox"/>
Degasing	<input checked="" type="checkbox"/>	Degasing	<input checked="" type="checkbox"/>
PURGE	<input type="checkbox"/>	PURGE	<input type="checkbox"/>

S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------

Cool Down and Defrosting of LAR-Pumps P30A, B

Start Permissive: Pump should not run and Sealgas-Flow has to be "OK"

1. Cool Down

Starting Cool Down: HS6551 / 6561 switch to "ON" by Operator

- Action:
1. Controller HIC6553 / 6563 to "MANUAL"-Mode and Y=0%
HV6552 / 6562 (LAR Inlet) to "OPEN"
HV6551A / 6561A (LAR Drain) to "OPEN"
 2. Waiting Time (20 sec.)
 3. HIC6553 / 6563 to "MANUAL"-Mode and Y=100%
HV6551A / 6561A (LAR Drain) to "CLOSE"
 4. TAL6553 / 6563 Temperature check -> -150 DEGC
 5. HS6551 / 6561 to "OFF" -> Cool Down finished

2. Defrosting

Starting Defrosting: HSH6551B / 6561B switch to "ON" by Operator

- Action:
1. Controller HIC6553 / 6563 to "MANUAL"-Mode and Y=0%
HV6552 / 6562 (LAR Inlet) to "CLOSE"
HV6559A / 6569A (LAR Outlet) to "CLOSE"
 2. Waiting Time (20 sec.)
 3. HV6551B / 6561B (DEFROST. In) to "OPEN"
HV6551A / 6561A (LAR Drain) to "OPEN"
 4. Waiting Time (60 min.)
 5. HSH6551B / 6561B switch to "OFF" by Operator
HV6551B / 6561B (DEFROST. In) to "CLOSE"
HV6551A / 6561A (LAR Drain) to "CLOSE"
- Defrosting finished

P30

Interl.

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

E30 VAPORIZER - INTERLOCKING

HL6500A
 HL6500B
 HL6500C
 L6574A
 L6574B
 EL6553B
 EL6563B
 UA6574A
 LAL6570
 TALL6570A

READY TO
 START

P30A - INTERLOCKING

[]

BACKUP PUMP
 SELECTOR

[]

P30B - INTERLOCKING

[]

HL6500A
 PAHH6521
 PALL6521
 LALL6522
 TAHH6554
 PAHH6554
 TALL6556
 UA6551
 HA6551A
 IAL6551
 L6551O

HL6500A
 PAHH6521
 PALL6521
 LALL6522
 TAHH6564
 PAHH6564
 TALL6566
 UA6561
 HA6556A
 IAL6561
 L6561O

P30A - PERMISSION

TAL6553 []

P30B - PERMISSION

TAL6563 []

TRENDS

P30

[] COOL DOWN - DEFROSTING
 INFO

S

Current

A

B

C

D

MENU

Main Air
 Compr.

Booster
 Turbine

Nitrogen
 Compr.

Main H.
 Exch.

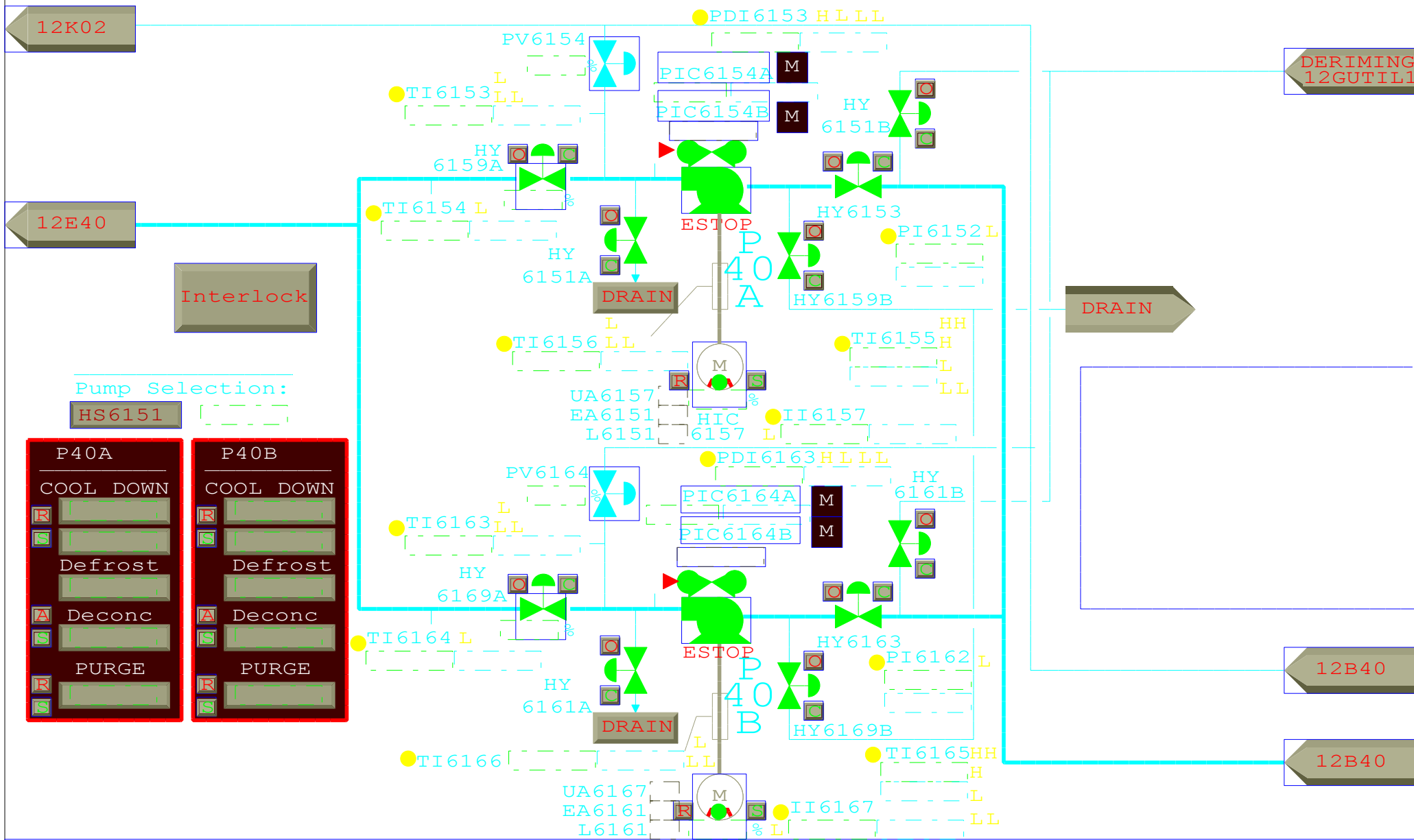
Booster
 Compr.

Air
 Purif.
 Unit

O2 / N2
 Column

Argon
 Rectif.

TRENDS



S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------

Cool Down and Defrosting of LOX-Pumps P40A, B

Start Permissive: Pump should not run and Sealgas-Flow has to be "OK"

1. Cool Down

Starting Cool Down: HS6151 / 6161 switch to "ON" by Operator

- Action:
1. Controller HIC6153 / 6563 to "MANUAL"-Mode and Y=0%
HV6152 / 6162 (LOX Inlet) to "OPEN"
HV6151A / 6161A (LOX Drain) to "OPEN"
 2. Waiting Time (20 sec.)
 3. HIC6153 / 6163 to "MANUAL"-Mode and Y=100%
HV6151A / 6161A (LOX Drain) to "CLOSE"
 4. TAL6153 / 6163 Temperature check -> -150 DEGC
 5. HS6151 / 6161 to "OFF" -> Cool Down finished

2. Defrosting

Starting Defrosting: HSH6151B / 6161B switch to "ON" by Operator

- Action:
1. Controller HIC6153 / 6163 to "MANUAL"-Mode and Y=0%
HV6152 / 6162 (LOX Inlet) to "CLOSE"
HV6159A / 6169A (LOX Outlet) to "CLOSE"
 2. Waiting Time (20 sec.)
 3. HV6151B / 6161B (DEFROST. In) to "OPEN"
HV6151A / 6161A (LOX Drain) to "OPEN"
 4. Waiting Time (60 min.)
 5. HSH6151B / 6161B switch to "OFF" by Operator
HV6151B / 6161B (DEFROST. In) to "CLOSE"
HV6151A / 6161A (LOX Drain) to "CLOSE"
- Defrosting finished

P40

Interl.

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

E40 OXYGEN VAPORIZER - INTERLOCKING

HL6100A
 HL6100B
 HL6100C
 UA6174A
 L6151O
 L6161O
 TALL6170A
 EL6154B
 EL6164B
 L6174A
 L6174B
 LAL6170

READY TO
 START

P40A - INTERLOCKING

HL6100A
 TAL6154
 PAHH6121
 PALL6121
 LALL6122
 TALL6153
 TALL6156
 TAHH6155
 TALL6155
 PDALL6153
 UA6157
 EA6151C
 HA6151A
 IAL6157
 L6151O

BACKUP PUMP
 SELECTOR

P40B - INTERLOCKING

HL6100A
 TAL6164
 PAHH6121
 PALL6121
 LALL6122
 TALL6163
 TALL6166
 TAHH6165
 TALL6165
 PDALL6163
 UA6167
 EA6161C
 HA6161A
 IAL6167
 L6161O

P40A - PERMISSION

TAL6155

P40B - PERMISSION

TAL6165

TRENDS

P40

COOL DOWN - DEFROSTING
 INFO

S
 A
 B
 C
 D

Current

MENU

Main Air
 Compr.

Booster
 Turbine

Nitrogen
 Compr.

Main H.
 Exch.

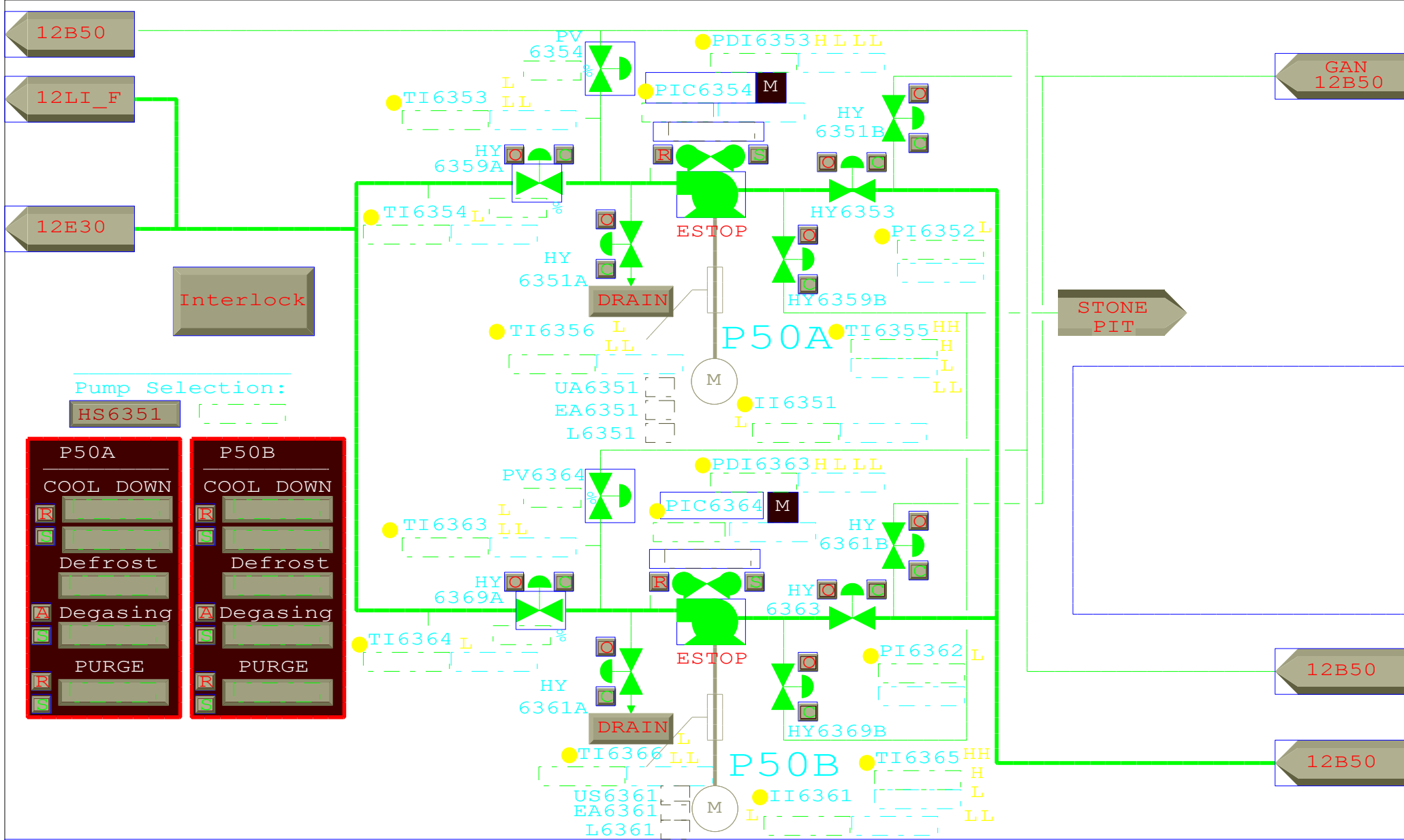
Booster
 Compr.

Air
 Purif.
 Unit

O2 / N2
 Column

Argon
 Rectif.

TRENDS



Pump Selection:

HS6351

P50A		P50B	
COOL DOWN	<input type="checkbox"/>	COOL DOWN	<input type="checkbox"/>
Defrost	<input type="checkbox"/>	Defrost	<input type="checkbox"/>
Degasing	<input type="checkbox"/>	Degasing	<input type="checkbox"/>
PURGE	<input type="checkbox"/>	PURGE	<input type="checkbox"/>

S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	-----------------	-----------------	-----------------	---------------	----------------	-----------------	----------------	---------------	--------

Cool Down and Defrosting of LIN-Pumps P50A, B

Start Permissive: Pump should not run and Sealgas-Flow has to be "OK"

1. Cool Down

Starting Cool Down: HS6351 / 6361 switch to "ON" by Operator

- Action:
1. Controller HIC6353 / 6363 to "MANUAL"-Mode and Y=0%
HV6352 / 6362 (LIN Inlet) to "OPEN"
HV6351A / 6361A (LIN Drain) to "OPEN"
 2. Waiting Time (20 sec.)
 3. HIC6353 / 6363 to "MANUAL"-Mode and Y=100%
HV6351A / 6361A (LIN Drain) to "CLOSE"
 4. TAL6353 / 6363 Temperature check -> -150 DEGC
 5. HS6351 / 6361 to "OFF" -> Cool Down finished

2. Defrosting

Starting Defrosting: HSH6351B / 6361B switch to "ON" by Operator

- Action:
1. Controller HIC6353 / 6363 to "MANUAL"-Mode and Y=0%
HV6352 / 6362 (LIN Inlet) to "CLOSE"
HV6359A / 6369A (LIN Outlet) to "CLOSE"
 2. Waiting Time (20 sec.)
 3. HV6351B / 6361B (DEFROST. In) to "OPEN"
HV6351A / 6361A (LIN Drain) to "OPEN"
 4. Waiting Time (60 min.)
 5. HSH6351B / 6361B switch to "OFF" by Operator
HV6351B / 6361B (DEFROST. In) to "CLOSE"
HV6351A / 6361A (LIN Drain) to "CLOSE"
- Defrosting finished

P50

Interl.

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

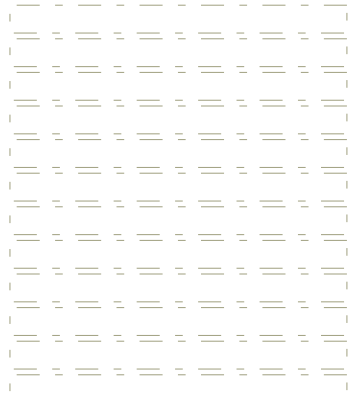
O2 / N2
Column

Argon
Rectif.

TRENDS

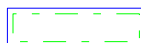
E50 NITROGEN VAPORIZER - INTERLOCKING

HL6300A
HL6300B
HL6300C
UA6374A
L6351O
L6361O
TALL6370A
EL6354B
EL6364B
L6374A
L6374B
LAL6370

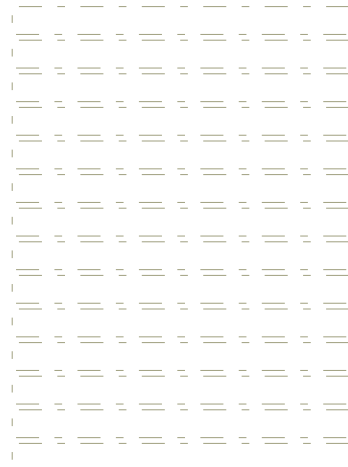


READY TO
START

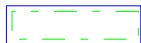
P50A - INTERLOCKING



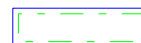
HL6300A
TAL6354
PAHH6321
PALL6321
LALL6322
TALL6353
TALL6356
TAHH6355
TALL6355
PDALL6353
UA6351
HA6351A
IAL6351
L6361O



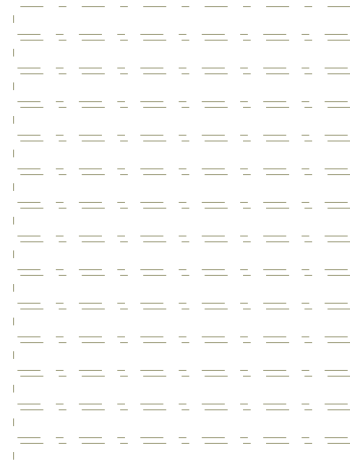
BACKUP PUMP
SELECTOR



P50B - INTERLOCKING



HL6300A
TAL6354
PAHH6321
PALL6321
LALL6322
TALL6363
TALL6366
TAHH6365
TALL6365
PDALL6363
UA6361
HA6361A
IAL6361
L6351O



P50A - PERMISSION

TAL6355



P50B - PERMISSION

TAL6365



TRENDS

P50

COOL DOWN - DEFROSTING
INFO

S
A
B
C
D

Current

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

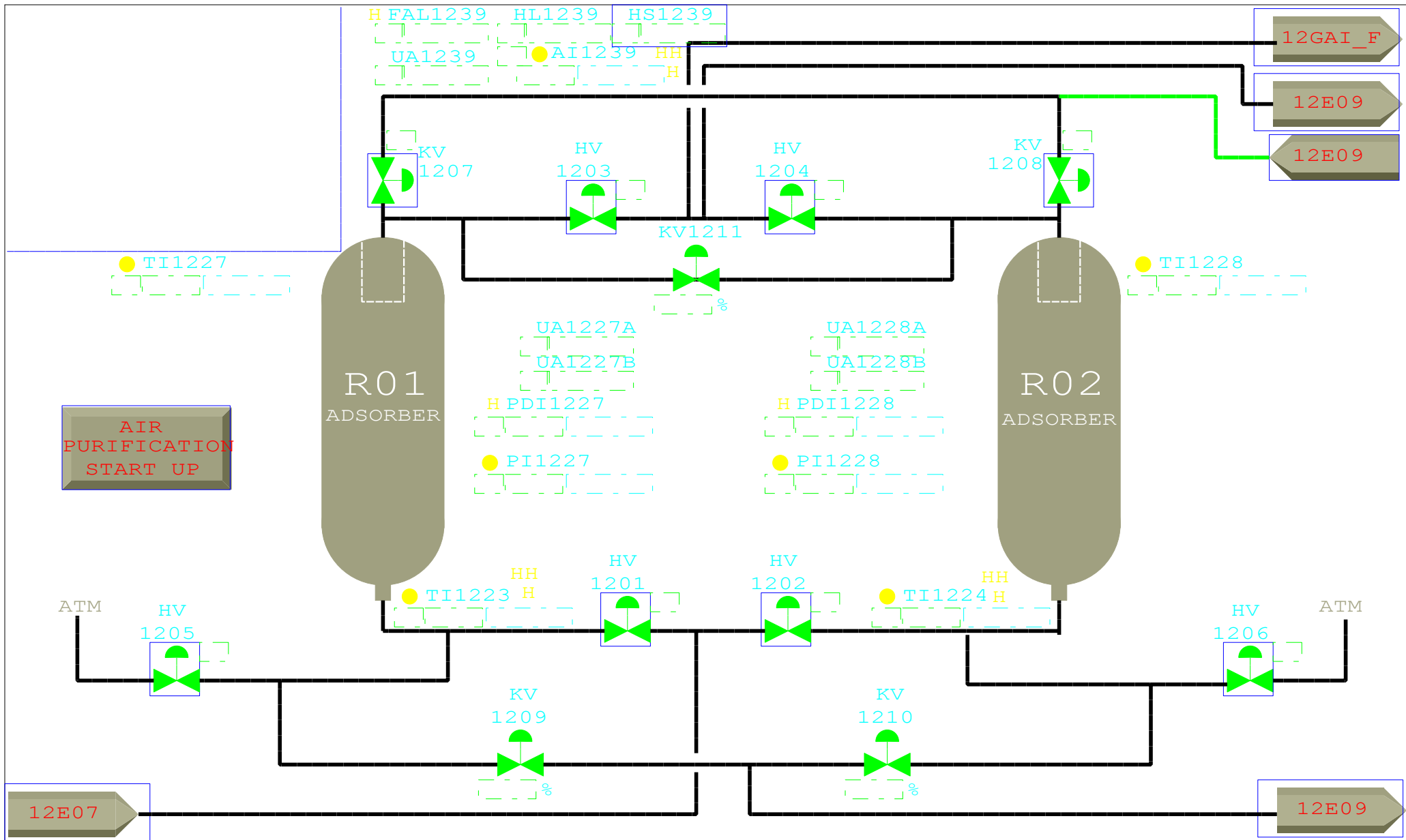
Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS



S
A
B
C
D

Current

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
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Date Printed: Tuesday, March 23, 2004 at 4:09:56 AM

Date Last Modified: Thursday, March 18, 2004 at 9:00:00 AM

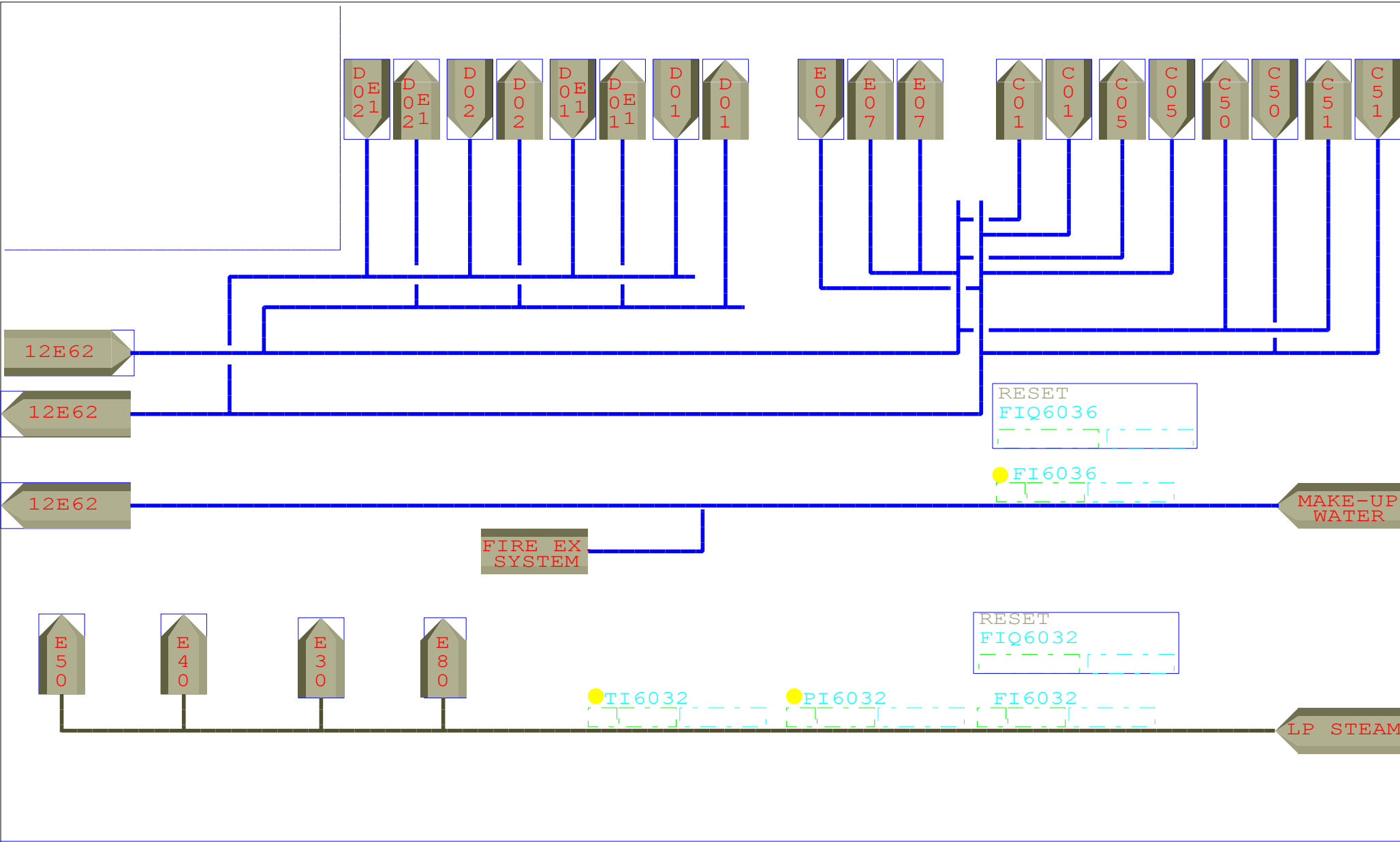
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<input type="text"/>		<input type="text"/>		REGEX <input type="button" value="ON"/> <input type="button" value="OFF"/> EXCEPTIONAL REACTIVATION	
SEQ INIT		PHASE SEQUENCER			
<input type="text"/>		R01		R02	
ONLINE					
HP ISOLATION					
DEPRESSURIZATION					
BLOWOFF					
HEATING					
COOLING					
LP ISOLATION					
PRESSURIZATION					
IN PARALLEL					
START OF REGEN					
FORCE NEXT STEP		NEXT STEP			
<input type="text"/>		<input type="text"/>			
		UNIT MODE		<input type="text"/>	
		REQUESTED HEAT		HEAT SUPPLIED TIME	
				<input type="text"/>	
		PROGRESS RATES			
		CYCLE TIME		HEAT CYCLE	
AIR/CO2 CONTENT		CYCLE TIMES			
<input type="text"/>		ALUMINA		MS CALCULATED	
		WAITING TIME			
		MONITOR.TIME			
		ACTUAL TIME			
		WATER MASS FLOW		<input type="text"/>	
		CO2 MASS FLOW		<input type="text"/>	
		CUMULATION OF WATER		<input type="text"/>	
		TOTAL MASS OF WATER		<input type="text"/>	
		CUMULATION OF GAS		<input type="text"/>	
		TOTAL CO2 MASS		<input type="text"/>	



S
A
B
C
D

Current

-
-
-
-
-
-
-
-
-
-



S
A
B
C
D

Current

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

A	[]	PV
B	[]	PV
C	[]	PV
D	[]	PV
E	[]	PV

A	[]	PV
B	[]	PV
C	[]	PV
D	[]	PV

MENU	Main Air Compr.	Booster Turbine	Nitrogen Compr.	Main H. Exch.	Booster Compr.	Air Purif. Unit	O2 / N2 Column	Argon Rectif.	TRENDS
------	--------------------	--------------------	--------------------	------------------	-------------------	-----------------------	-------------------	------------------	--------

A	[]	PV
B	[] CO	
C	[] SP	
D	[] PV	
E	[] PV	

F	[] PV	
G	[] CO	
H	[] SP	
I	[] PV	

- MENU
- Main Air Compr.
- Booster Turbine
- Nitrogen Compr.
- Main H. Exch.
- Booster Compr.
- Air Purif. Unit
- O2 / N2 Column
- Argon Rectif.
- TRENDS

2. Air Separation Unit

2.1 Analysing Measurements:

A

B

2.2 Flow Measurements: Totalizers:

A

B

C

2.3 Liquid Level Measurements:

A

2.4 Diff.-Press. & Press. Measurements:

A Diff. Press.

B Press.

C Press.

D Press.

2.5 Temperature Measurements:

A

B

C MHE #1

D MHE #2

E MHE #3

F MHE #4

G Recti. LOX-F.

H

I Argon

TREND-1

MENU

Main Air Compr.

Booster Turbine

Nitrogen Compr.

Main H. Exch.

Booster Compr.

Air Purif. Unit

O2 / N2 Column

Argon Rectif.

TREND-2

1. Compressors and Turbines

1.1 Air Compressor C01:

A Proc
ess B Lube
Oil C Compr. D Motor E Vibr. F Surge Test

1.2 Air Booster D01:

A Proc
ess B Lube
Oil C Compr. D Motor

Air Booster D02:

E Proc
ess F Lube
Oil G Compr. H Motor

1.3 N2 Compressor C50:

A Proc
ess B Lube
Oil C Compr. D Motor E Vibr.

1.4 N2 Compressor C51:

A Proc
ess B Lube
Oil C Compr. D Motor E Vibr.

1.5 Air Booster Compr. C05:

A Process
Oil B Compr.
Vibr. C Motor

1.6

1.7 Liquid Pumps:

A P01A
P01B B P10A
P10B C P30A
P30B D P40A
P40B E P50A
P50B

TREND-1

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TREND-2

12P40

S

Current

A

B

C

D

MENU

Main Air
Compr.

Booster
Turbine

Nitrogen
Compr.

Main H.
Exch.

Booster
Compr.

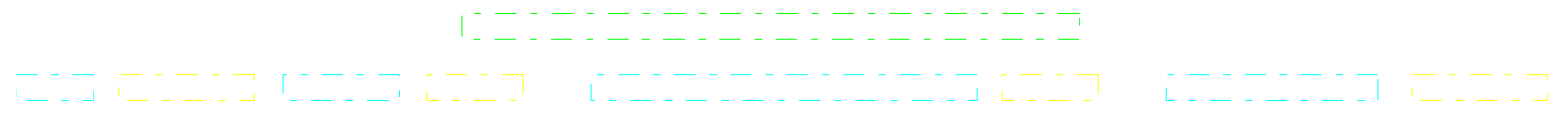
Air
Purif.
Unit

O2 / N2
Column

Argon
Rectif.

TRENDS

Status for Node []



00 [] [] []
01 [] [] []

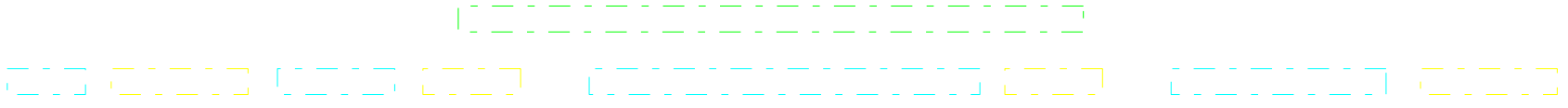
02 [] [] []
03 [] [] []
04 [] [] []
05 [] [] []

Slave status

Module 2 []
Module 4 []

PR NX

Status for Node []



Slave status

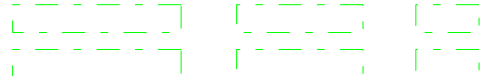


PR NX

Status for Node []

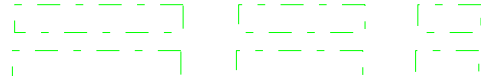


00



01

02



03

04

05



Slave status

Module 3 []

Module 5 []

PR NX

