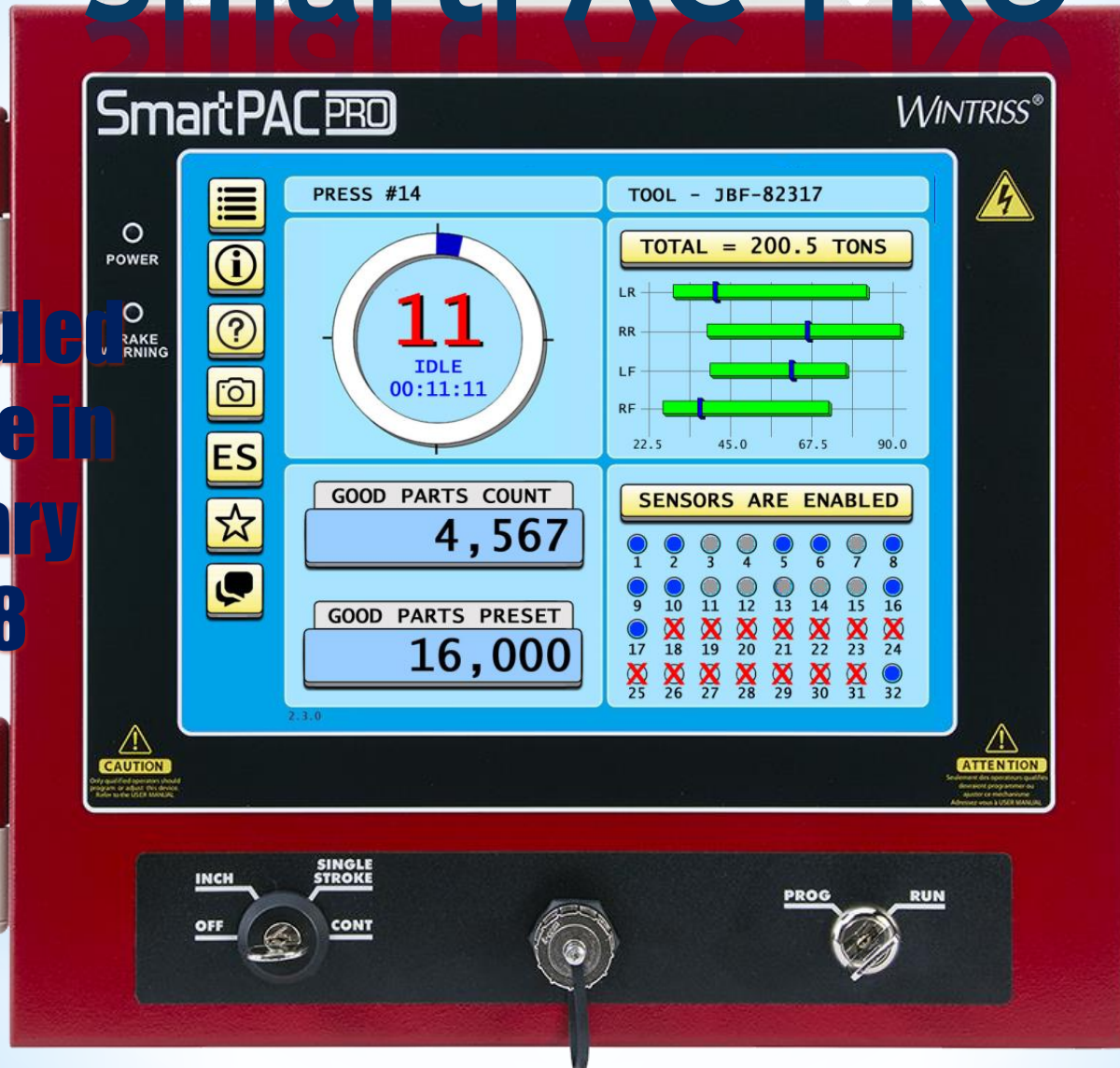


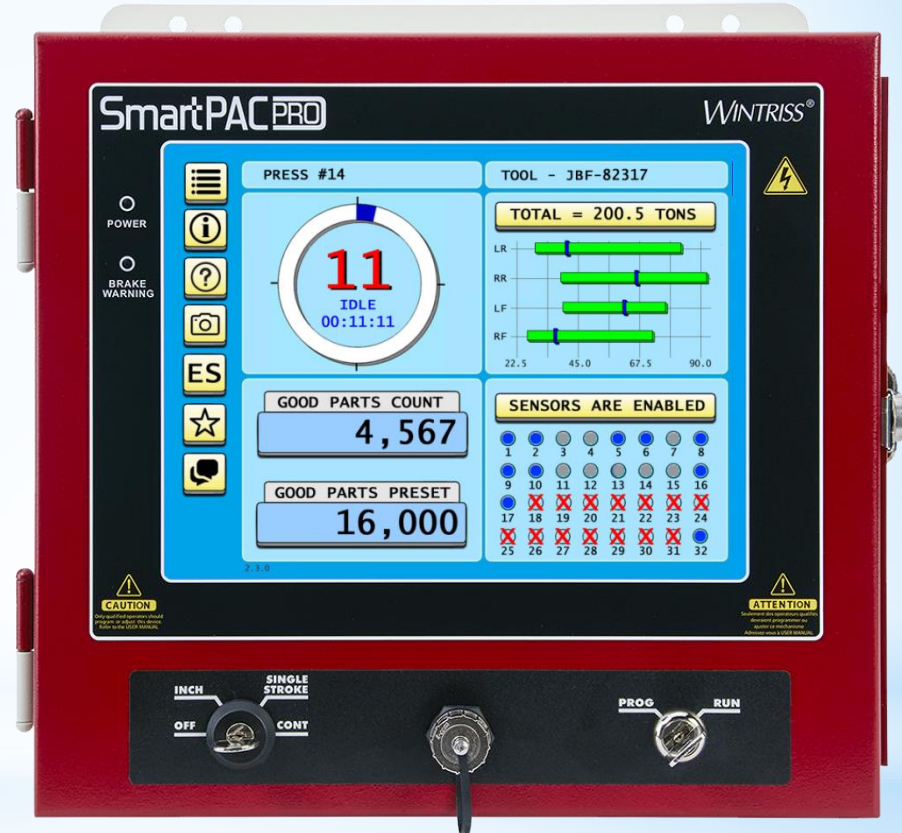
SmartPAC PRO

**Scheduled
release in
January
2018**



SmartPAC PRO

We've created the latest edition of our flagship product using new technology



SmartPAC Comparison

SmartPAC 2



SmartPAC PRO



Processor Type	Single Core	Dual Core	2x
Processor Speed	650 MHz (x1)	1.7 GHz (x2)	5x
System Memory	256 MB Flash	32 GB SATA	125x
Tool Memory	250 kB SRAM	32 GB SD Card	12,800x
OS Size	140 MB	2 GB	14x

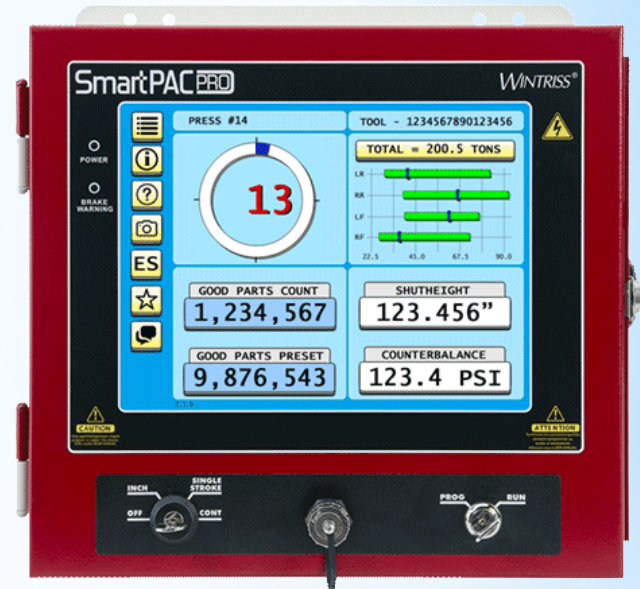
Features

- Touch interface
 - 12” screen
 - 1024 x 768 resolution
 - Resistive touch screen
- Unlimited Tool Setups
 - The PRO has 128,000 times more setup memory than SPAC-2
 - Tool “Numbers” can be up to 16 characters in length, and can include numbers, letters, and special characters
 - Once programmed, tool setups can be shared among networked SmartPAC PRO units!

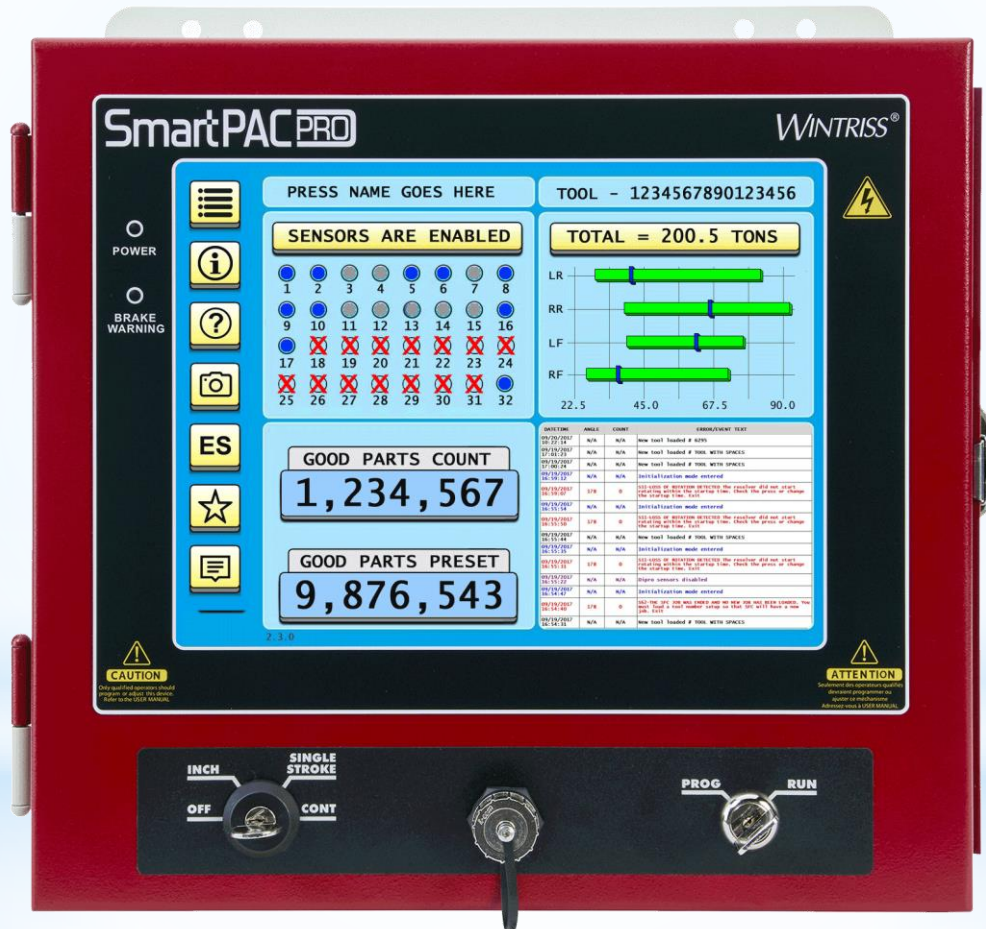


Dashboards

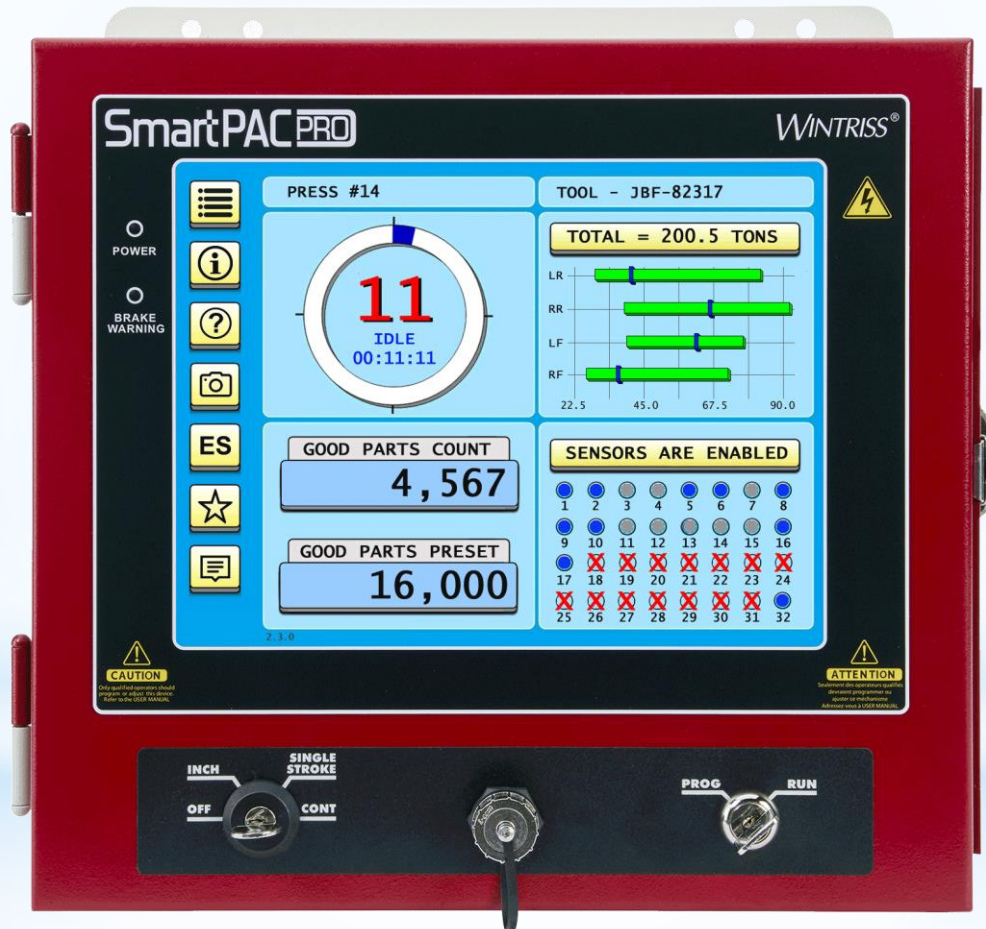
- Customizable “Dashboards”
 - Users can customize the main run screen
 - Once created, these dashboards can be saved, and quickly recalled
 - The SmartPAC will remember which dashboard was previously displayed, and will retrieve it at power up, and when the key is switched to run
 - Users will have the option to select many different types of information and several different formats (samples shown)



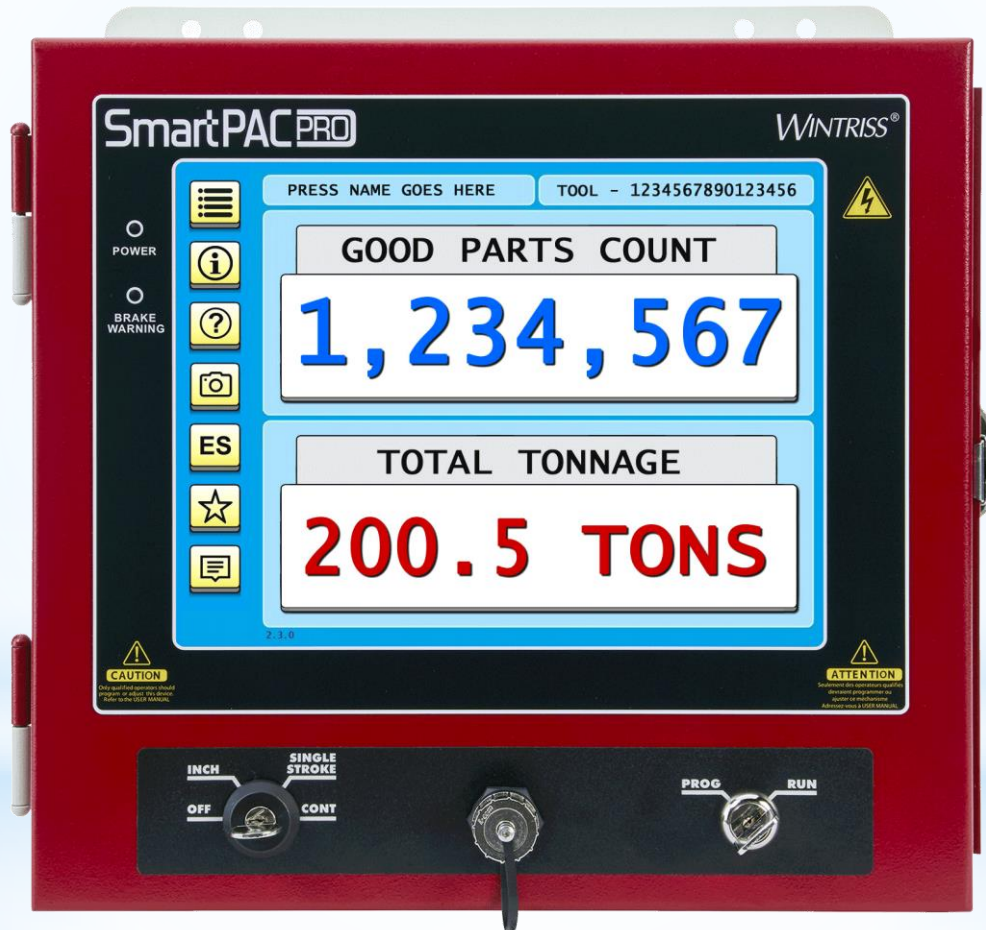
Dashboards



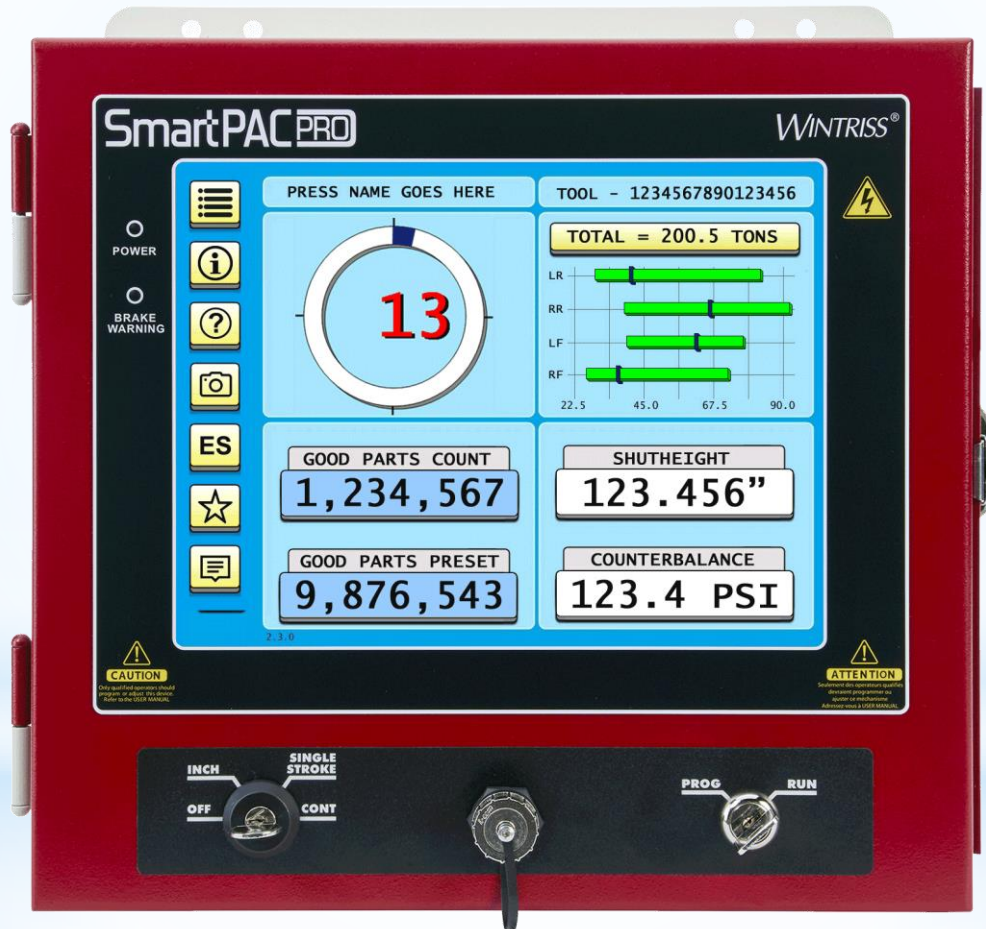
Dashboards



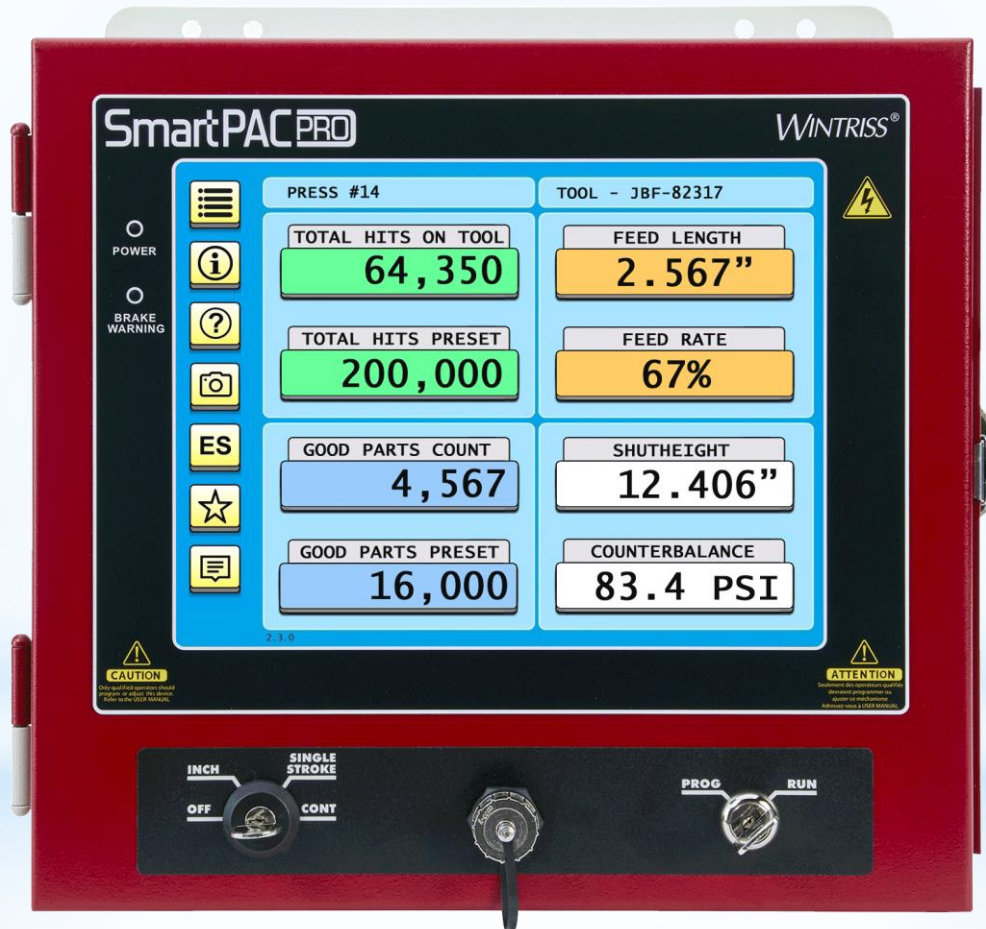
Dashboards



Dashboards



Dashboards

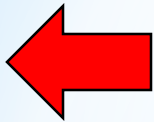


Navigation Icons



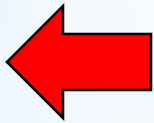
- You might've noticed a series of icons on the left side of the screen
- These buttons will be alongside the dashboard screens, the main run menu, and elsewhere throughout the run and program modes

Navigation Icons



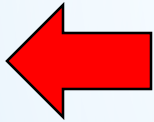
The main menu button brings you immediately out to the main run menu

Navigation Icons



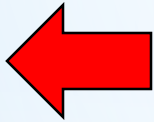
The Information button displays the installed options and network settings

Navigation Icons



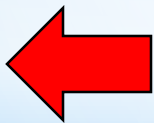
The ? Button shows the help screen for the currently displayed screen

Navigation Icons



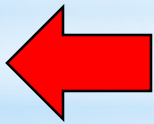
The Camera button takes a screenshot of the currently displayed screen

Navigation Icons



This button changes the language from English to Spanish (and back)

Navigation Icons

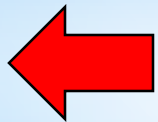


This button shows, and allows you to manage your “Favorite” screens

Favorites

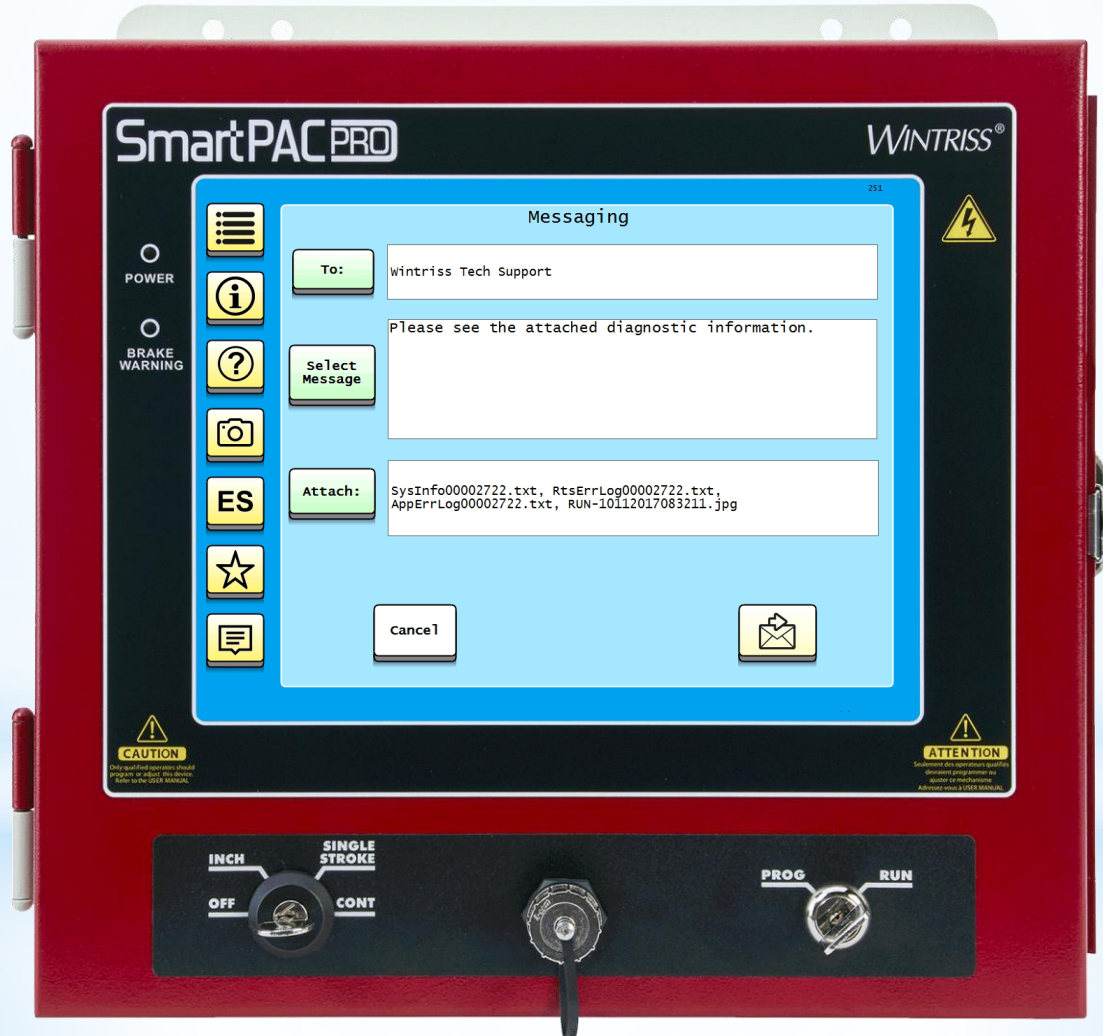


Navigation Icons

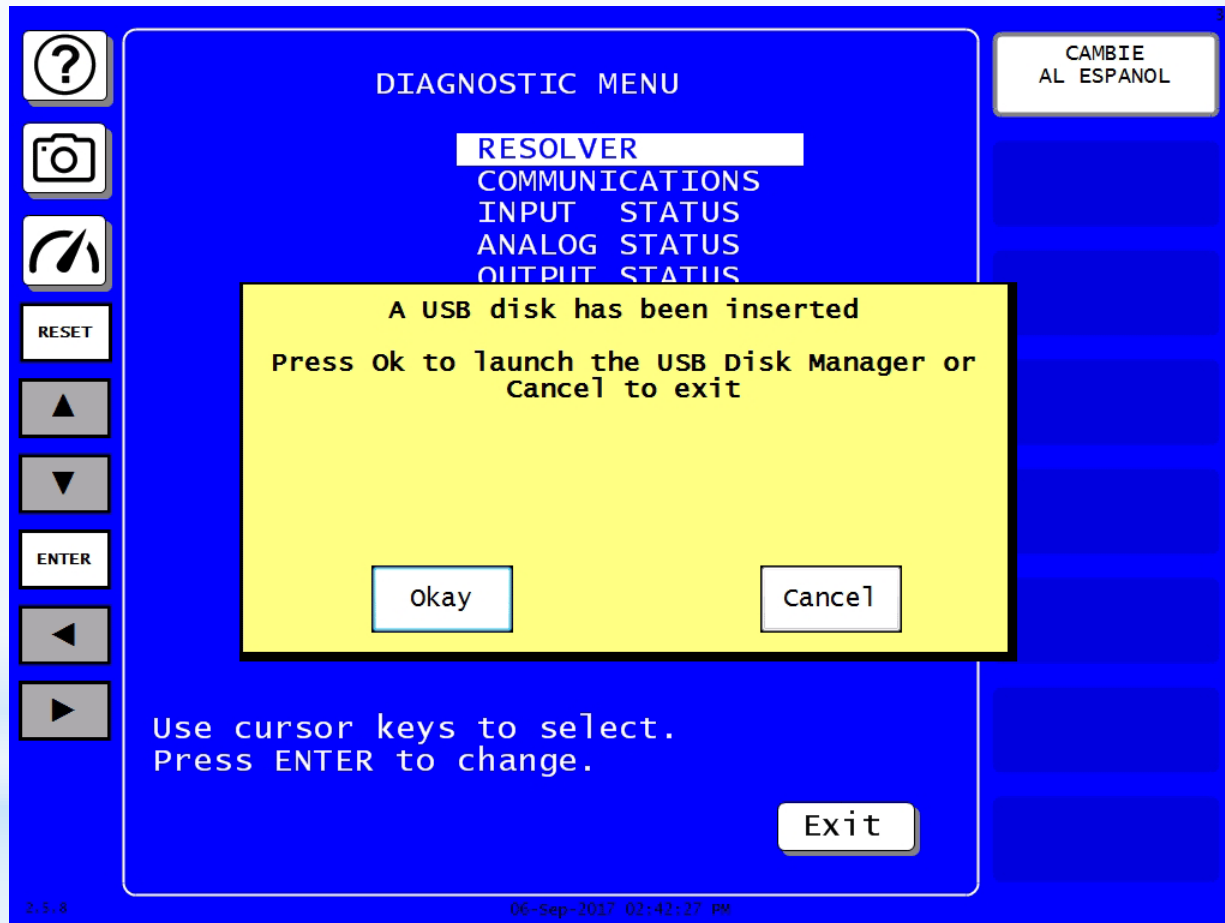


This button open the messaging function

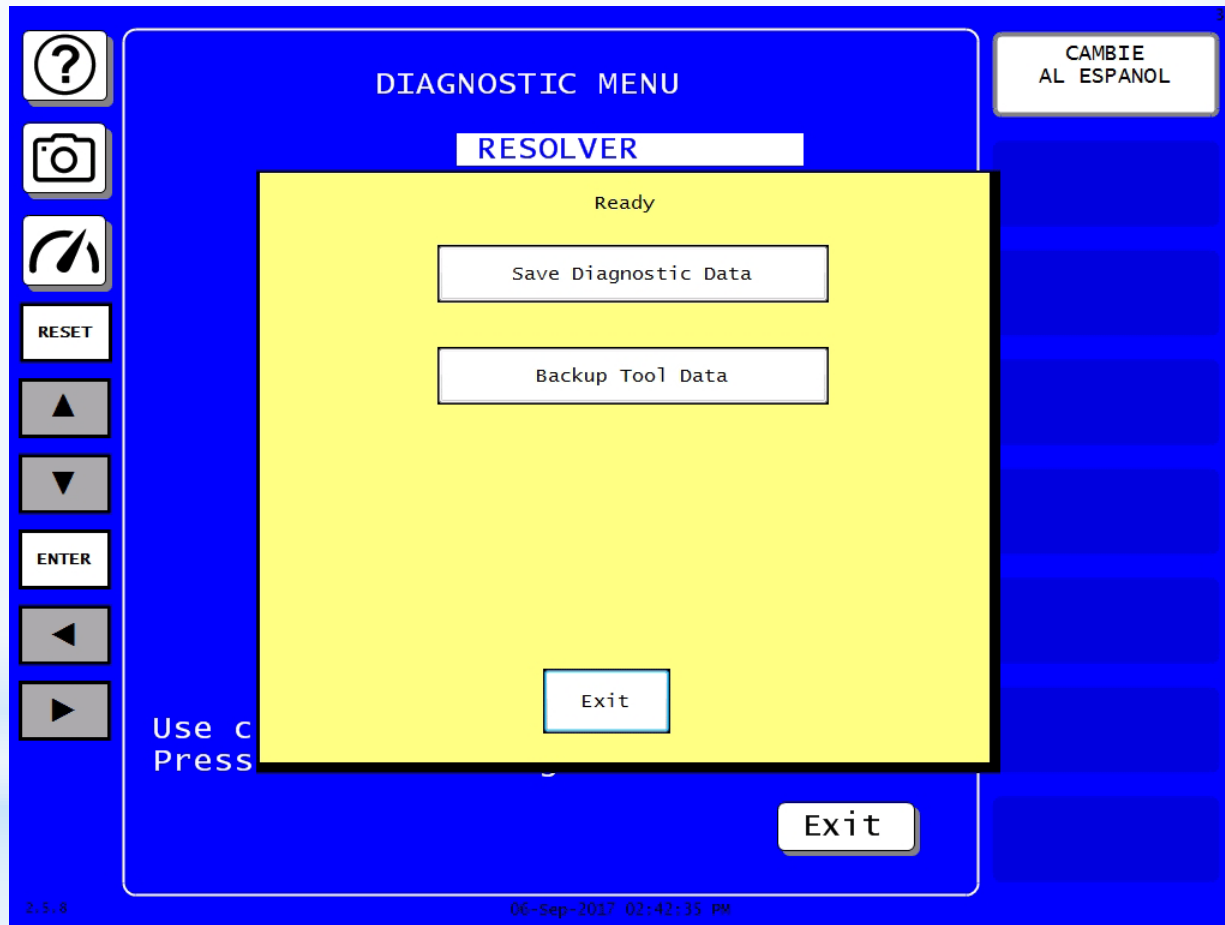
Messaging



Features



Features



Features

- Built-in USB Port
 - External USB port
 - Firmware updates
 - Bar code scanners (keyboard style)
 - Collect virtually unlimited screen captures onto a USB disk
 - Download log files (Installed Options, Error/Event logs, single board computer logs, etc)
- Improved Serviceability

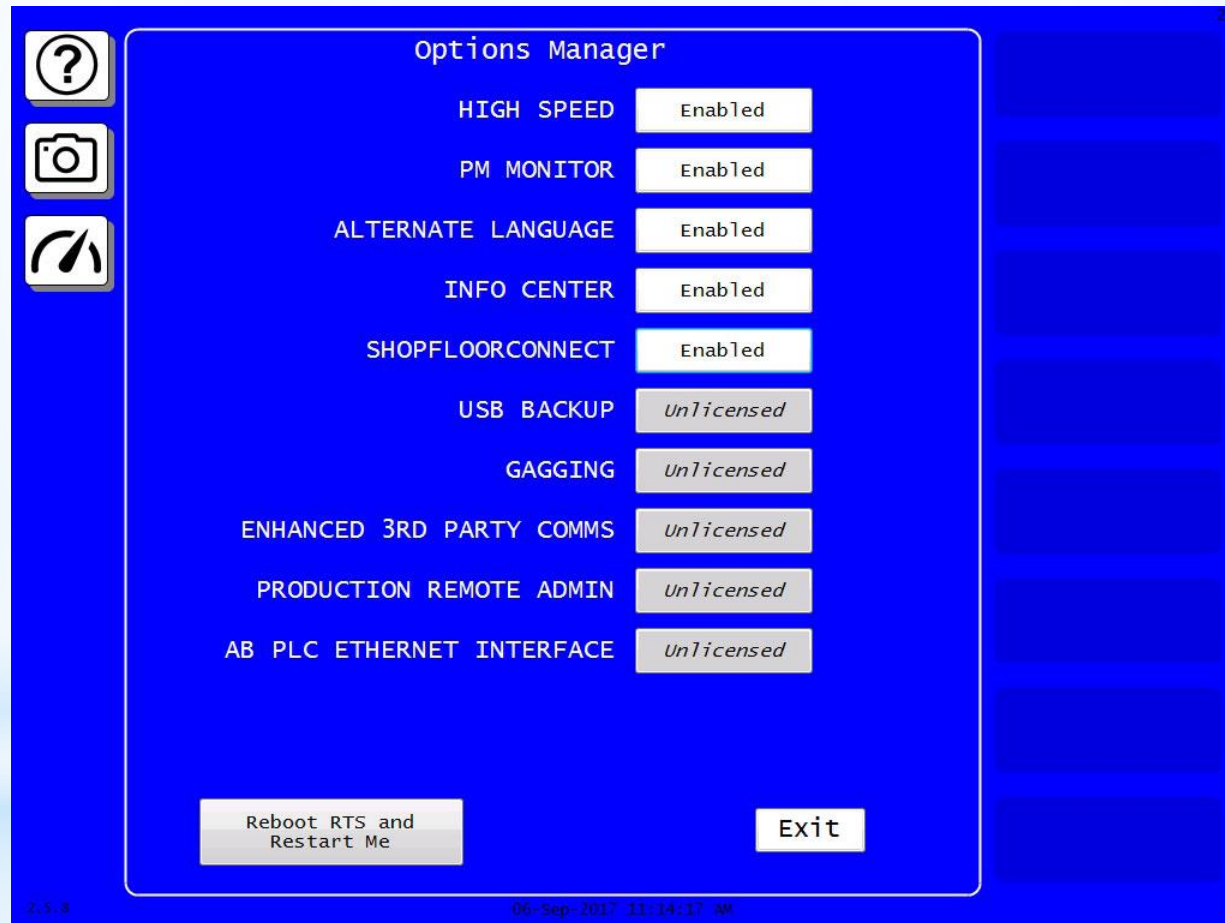


The SD Card

- The SD Card is the “soul” of the SmartPAC PRO
- It’s also the only serialized part of the control
- The tools, installed options*, and all error/event logs are stored on the SD Card
- When swapping boards, simply move the SD card over to the new board, and all the important stuff comes with it
- The SD Card is internally configured to make unauthorized duplication difficult



The Options Manager



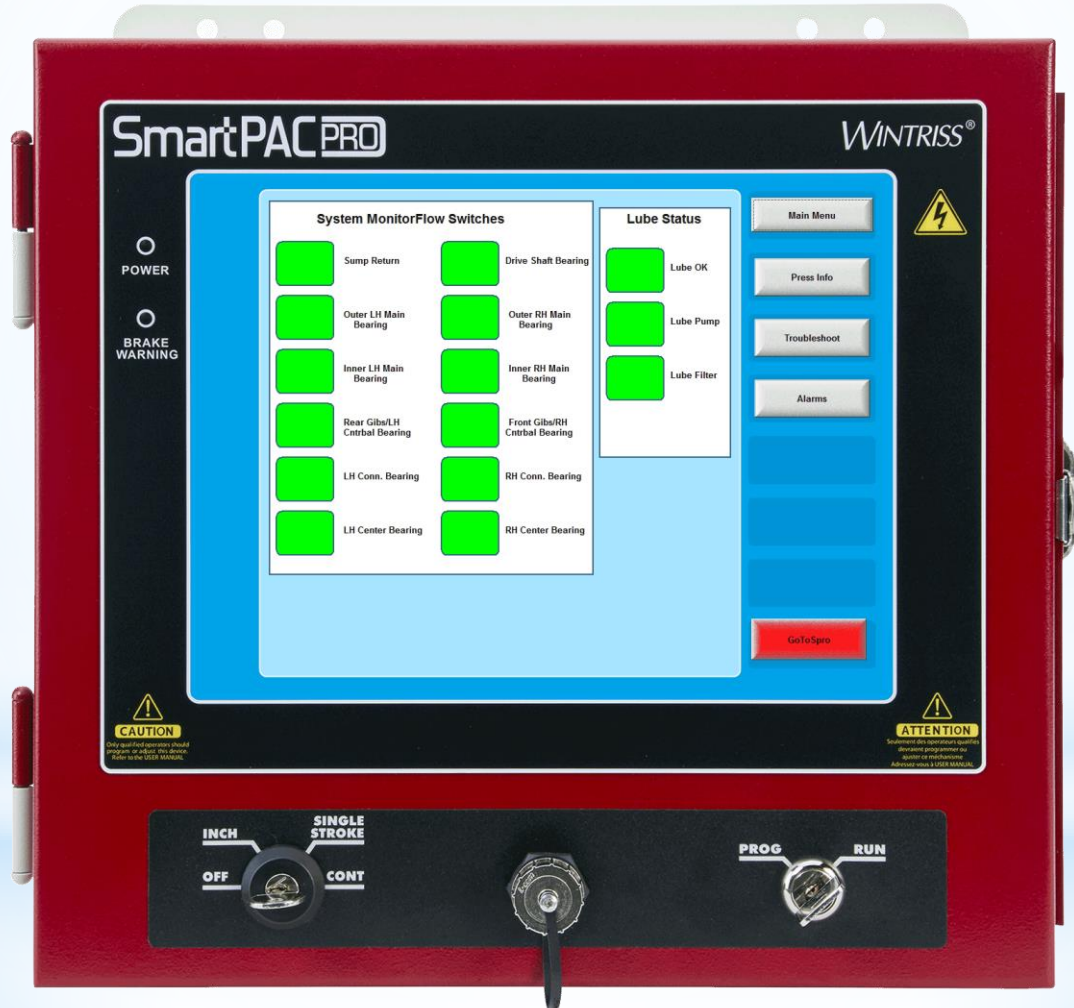
Wonderware Option

- The SmartPAC PRO can host HMIs created in Wonderware
- Wonderware is a popular Windows-based software package for quickly creating HMIs for industrial applications.
- Once the HMI is created in Wonderware, it runs on a Windows device (usually an industrial PC)
- If you've seen an HMI running on an industrial PC with multiple brands of devices at the back end, it was probably running an HMI created in Wonderware
- SmartPAC PRO will have an option that enables it to host the Wonderware application
- Because nobody likes to put additional screens on their presses

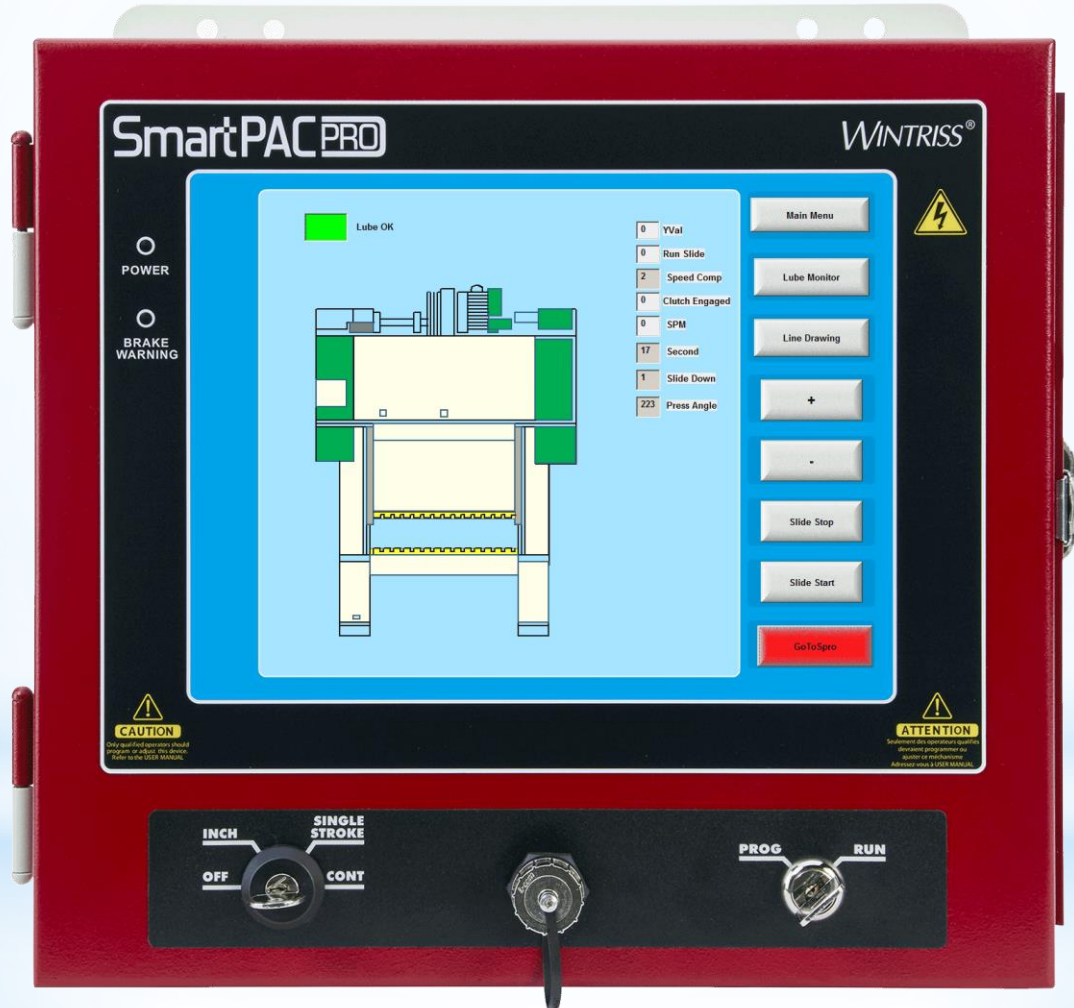
Wonderware Applications

- Applications for Wonderware include:
 - QDC systems
 - Replacement of console buttons and switches
 - Press lube system control
 - Multiple-press lines
 - Assembly and weld cells associated with press lines
 - Servo transfer systems

Wonderware Examples



Wonderware Examples



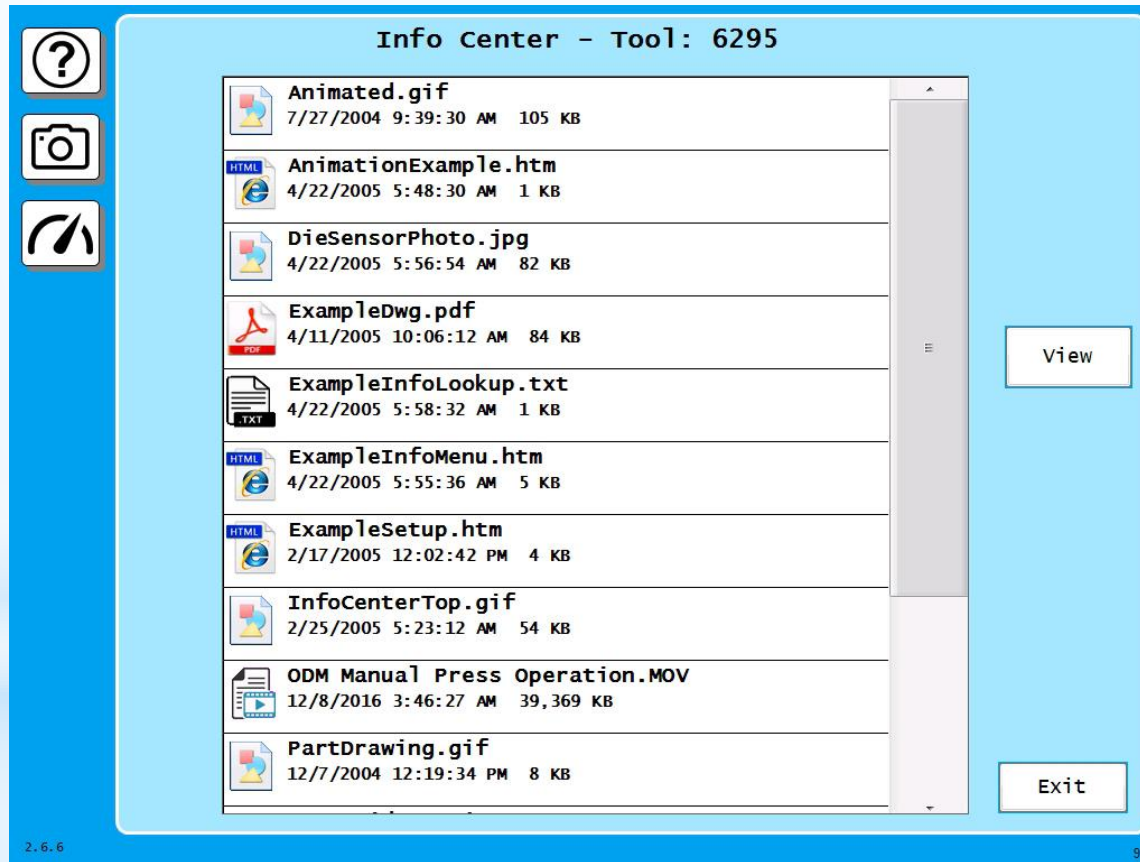
Other Features

- Improved Error/Event Log (better formatting)

DATETIME	ANGLE	COUNT	ERROR/EVENT TEXT
09/20/2017 10:22:14	N/A	N/A	New tool loaded # 6295
09/19/2017 17:01:23	N/A	N/A	New tool loaded # TOOL WITH SPACES
09/19/2017 17:00:24	N/A	N/A	New tool loaded # TOOL WITH SPACES
09/19/2017 16:59:12	N/A	N/A	Initialization mode entered
09/19/2017 16:59:07	178	0	S11-LOSS OF ROTATION DETECTED. The resolver did not start rotating within the startup time. Check the press or change the startup time. Exit
09/19/2017 16:55:54	N/A	N/A	Initialization mode entered
09/19/2017 16:55:50	178	0	S11-LOSS OF ROTATION DETECTED. The resolver did not start rotating within the startup time. Check the press or change the startup time. Exit
09/19/2017 16:55:44	N/A	N/A	New tool loaded # TOOL WITH SPACES
09/19/2017 16:55:35	N/A	N/A	Initialization mode entered
09/19/2017 16:55:31	178	0	S11-LOSS OF ROTATION DETECTED. The resolver did not start rotating within the startup time. Check the press or change the startup time. Exit
09/19/2017 16:55:22	N/A	N/A	Dipro sensors disabled
09/19/2017 16:54:47	N/A	N/A	Initialization mode entered
09/19/2017 16:54:40	178	0	S62-THE SFC JOB WAS ENDED AND NO NEW JOB HAS BEEN LOADED. You must load a tool number setup so that SFC will have a new job. Exit
09/19/2017 16:54:31	N/A	N/A	New tool loaded # TOOL WITH SPACES

Other Features

- Improved built-in info center navigation



Other Features

- Tool Summary shows all of the settings for the tool

Under Development

Tool Data Summary

Tool: 6160ABC Tool Name: DEMO TOOL Exit

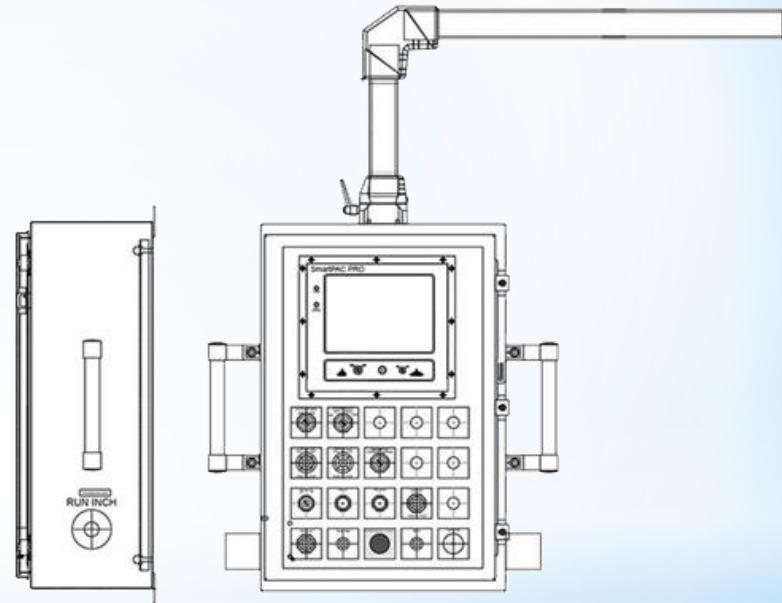
Counter	Preset	Increment Angle	Increment Mode	Output Mode	Pulse Time (mSec)
Good Parts	1200	270°	Stroke	Top Stop	N/A
Stroke	2400	270°	Stroke	Top Stop	N/A
Batch 1	100	270°	Good Parts	Top Stop	N/A
Batch 2	200	270°	Stroke	Toggle	N/A
Batch 3	300	270°	Stroke	Pulse	200

Cam	Name	Cam Type	Event	Multiple On/Offs
1	FEED ADVANCE	On/Off	245°-300°	
2	PILOT RELEASE	Auto Advance	150°-160°	
3	TOP STOP	Auto Advance	288°-311°	
4	HYD OVR RESET	Global On/Off	350°-10°	
5	CUTOFF ON/OFF	On/Off	160°-180°	
6	SPRAY LUBE	On/Off	90°-110°	210°-230°, 270°-300°
7	CHANNEL 7	Timed	64°, 70 MS	
8	CONVEYOR	DSV ON	15 Sec	
9 - 16	Unused			

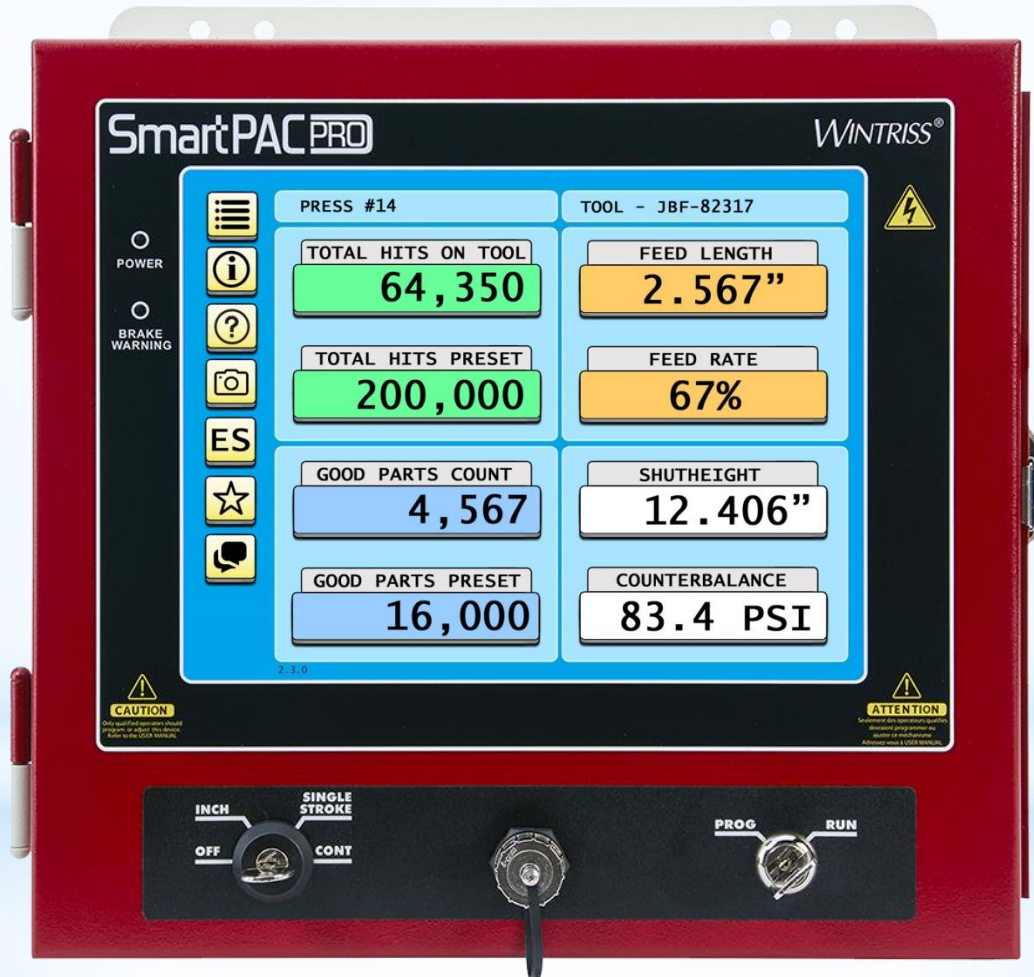
Sensor #	Name	Sensor Type	Stop Type	Ready Window	Critical Angle
1	PART EJECTION	Green	E-Stop	240° to 0°	N/A
2	SHORT FEED	Green Const	Smart Stop	4° to 160°	100°

2.6.6 9

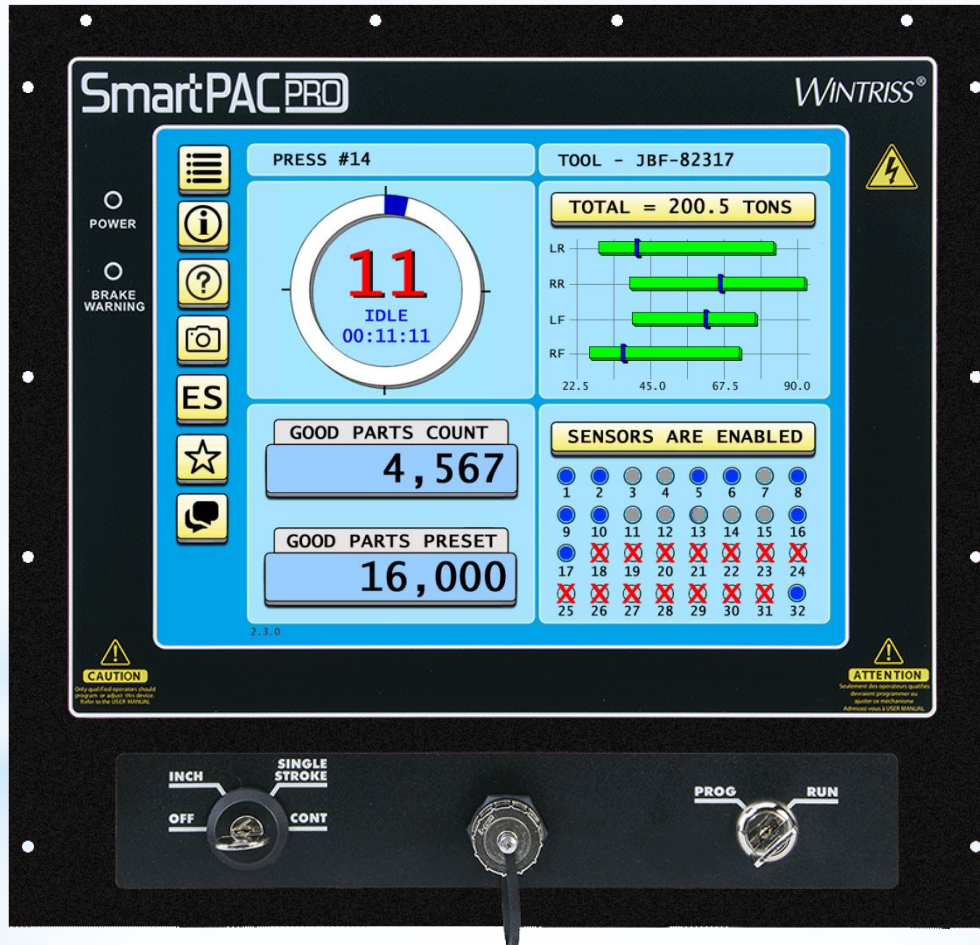
Packaging Options



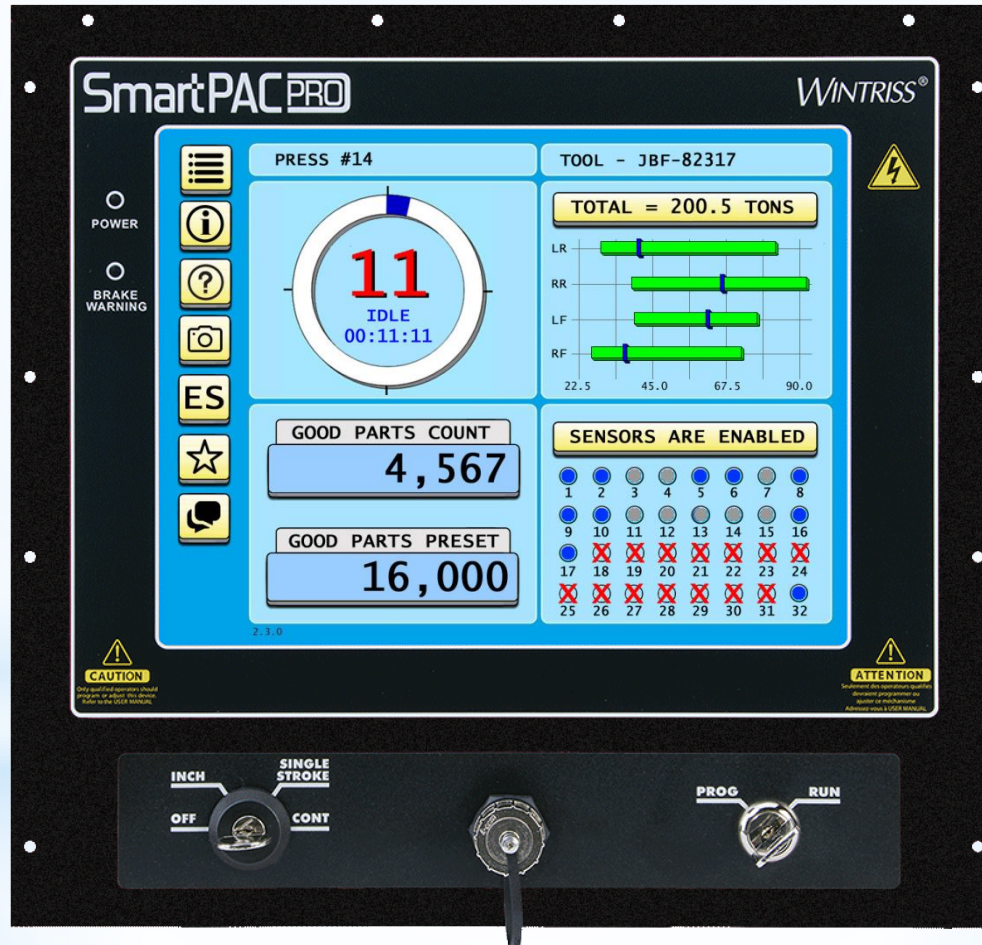
Versions - Enclosure



Versions - Panel Mount



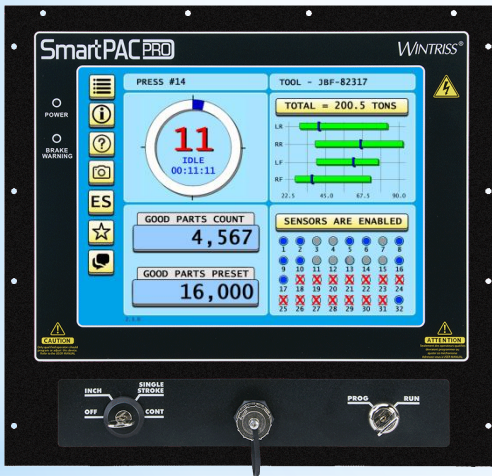
Versions - Remote I/O



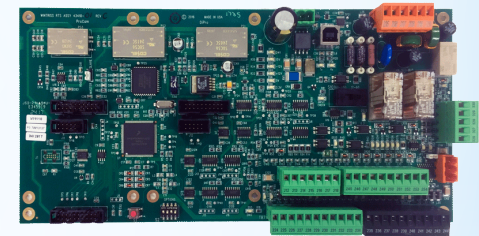
Versions - Remote I/O

The only connection required between the two parts is a ...

HMI



RTS (Real Time SmartPAC)



USB Cable

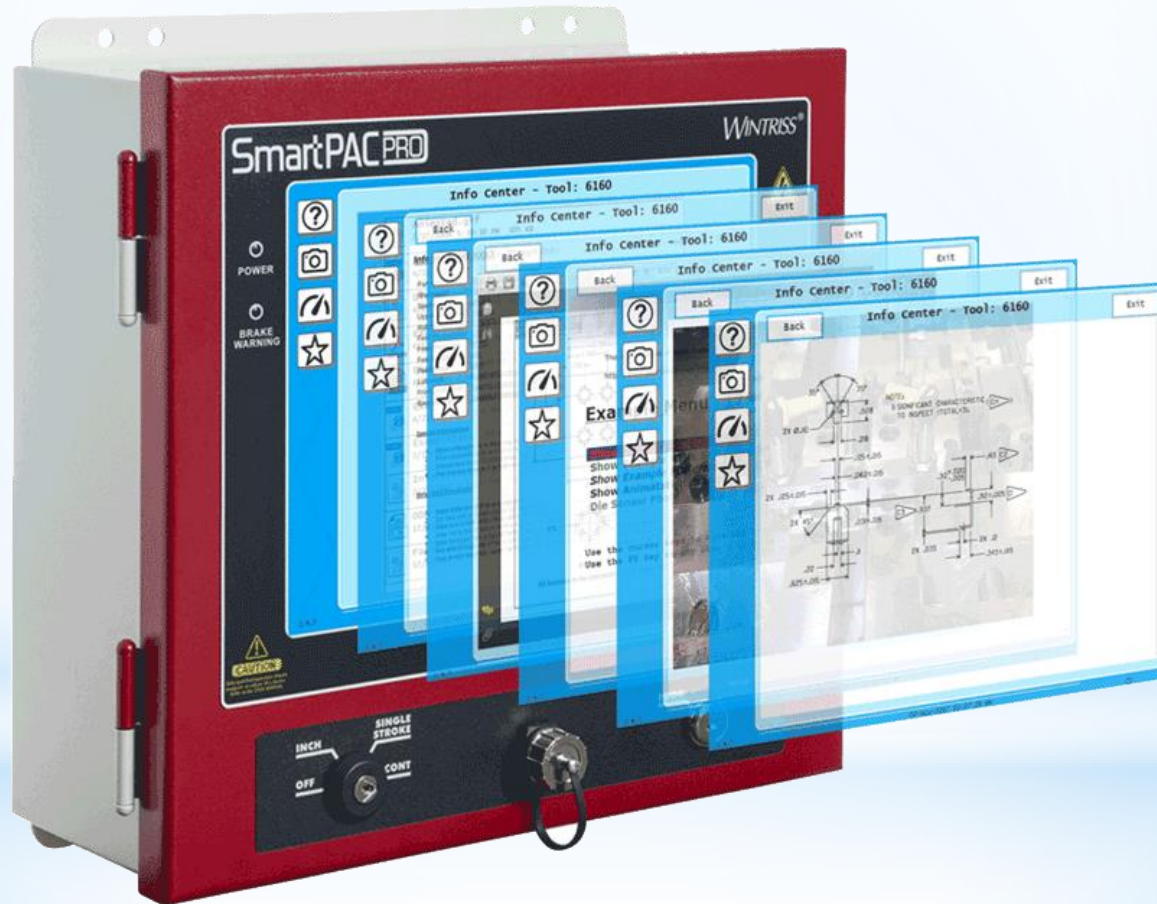


(up to 100' w/optional extender)



ProCamPAC, DiProPAC, Resolver, and all I/O connections are here

Future Enhancements



Future Enhancements

- With the memory and processing power now at our disposal, we have **BIG** plans for the SmartPAC PRO
- In the near future, look for updates to the ProCamPAC, new die protection sensor types, and greatly expanded counting capacities
- As new features become available, they will be released in firmware updates
- Over the long term, we're going to be able to expand this platform for years