From manufacturing the components ourselves to our engineers designing your custom system, we can provide complete compressor controls. And, we do not stop there. System installation, start-up, and after sales support are part of the total package.

Frank W. Murphy Manufacturer takes pride in providing a One-Stop Shop for compressor control with cost-effective, perfectly suited products for our customers—and we have been doing it since 1939.

Our success is based on Murphy associates’ desire to provide excellence in customer service. They designed and implemented a quality system that is certified by ISO 9001.

Murphy’s research and development team gives our customer the most advanced technology including PID control, link with computer supervised systems, and remote monitoring of compressor operations.

There are no limits to our total commitment to customer satisfaction. We always strive to develop and maintain a trusting relationship with our customers. Our growth has followed their growth around the world.

This brochure is intended to give an overview of our products and services to the compressor industry. Contact a Murphy associate for details and solutions without limits.
COMPRESSORS. Natural gas or air. Reciprocating or screw type. Low or high speed. We design controls and complete control systems to fit every compressor application.

COMPONENTS or COMPLETE SYSTEMS. End devices, single instruments, fault annunciators, controllers, micro-controllers, PLC'S and shut-down devices. We offer convenient replacement or upgrades for existing systems. Or we can design your fully automatic, complete operation control.

STANDARD. We specialize in cost-effective off-the-shelf systems. CUSTOM DESIGN. Experienced sales engineers are ready to provide the exact level of control technology you need to maximize efficiency. APPROVED and RATED. Intrinsically-safe. Explosion-proof. Weatherproof systems and components to meet UL, CUL, CE, CSA, FM and others. INNOVATION. We offer you the latest technology including micro-controllers, brand name PLC’s and our own specialized PLC units. COMMUNICATIONS. For added efficiency of equipment and personnel, Murphy systems can include automatic dialing to cellular phones, pagers, answering services and computers.
FROM SIMPLE SHUTDOWN TO SOPHISTICATED SCADA

- Traditional Alarm and Shut-down Panels
- Generic PLC Panels
- Digital and Electro-Mechanical Panels
- Pneumatic and Electro-Pneumatic Panels
- PLC Panel with Murphy BCD Communications
- Murphy Micro-control Panel with Cellular Telephone Communications
- Murphy Micro-controller with SCADA Software Communications
- MMI, PLC Based with Modbus Plus Supported SCADA
STARTING WITH YOUR CALL TO ONE OF OUR SALES ENGINEERS WE PUT OUR TEAM TO WORK FOR YOU.

GUARANTEED SUPERIOR CONTROLS
TEAMWORK AND EXPERTISE
Small compressor shut-down panel. Includes MARK III digital annunciator, DT9800 Series Tachometer with overspeed switch, HD35 hourmeter and various monitoring SWICHGAGE® instruments. The panel enclosure meets NEMA 3 specifications. Designed for Class I, Div. 2, Group D areas.

This control panel includes Murphy Series 500 logic control platform, control switches, push buttons and CS2001 controller/scanner for link with computer supervised system. The panel enclosure meets NEMA 4 specifications. Designed for Class I, Division 2, Group D areas.

Standard Cellular TATTLETALE® panel monitors and shuts down a compressor and can call out upon alarms or shutdowns. Includes a CS2001 controller/scanner, Series 500 logic control platform and Series 510 board, NEMA 4 enclosure. Designed for Class I, Division 2, Group D areas.

This pneumatic control panel is designed for offshore operation. It includes OPL Series SWICHGAGE®s for monitoring of suction, 1st, 2nd and 3rd stage discharge. Pressure test and in service valves are provided for easy calibration and test. DT9800 Series Tachometer/overspeed switch and TDX6 digital pyrometers. It also includes an LCDT alarm and shut-down annunciator.

Electric motor driven compressor panel features MODBUS PLUS communications. Includes touch screen interface, MODICON PLC, and special ESD button on the front. It is designed for Class I, Div. 2, Grp. D area. It has a special inner door that seals to NEMA 4 for an air purge system.

Local or remote control panel for fuel gas booster. Includes automatic engine start and stop sequences, valve control, warm-up and cooldown sequence. Utilizes a Series 400 controller and OPL Series SWICHGAGE®s with pulsation dampeners. For Class I, Div. 2, Grp. D areas.

PROVEN MURPHY CONTROL PANELS AND AUTOMATION SYSTEMS
This engine-driven compressor control panel includes an LCDT digital annunciator approved for Class I, Div. 1 areas, TD 9850 temperature scanner, MDM 4S loop monitor, and various SWITCHGAGE® instruments. The enclosure meets NEMA 3 specifications.

Engine-driven compressor control panel includes a MARK IV digital annunciator, DT 9800 series tachometer and overspeed switch, purge panel and status lights, and a NEMA 3 type enclosure. Inner door seals to NEMA 4 for an air purge system.

Control panel with an ALLEN-BRADLEY PLC, swing board and sealed latches to open the door without breaking the purge, man-machine touch screen, and interface with a PC via SCADA software. NEMA 4X enclosure for Class I, Division 2, Group D areas. Inner door seals to NEMA 4 for an air purge system.

This compressor control panel includes a PLC based controller with a touch screen monitor. It is furnished with a purge system and pneumatic test ports. The controller is housed in a 316 stainless steel enclosure that meets NEMA 4 specifications.
This engine-driven compressor control panel includes a MISTIC Opto-22 controller with Opto-22 I/O modules, DT9800 series tachometer and overspeed switch, HD35 hourmeter. The enclosure meets NEMA 4X specifications.

This is a local and remote control panel system for fuel gas boosters. The system includes: The remote panel which indicates valve status, monitors system pressures and will start local units as needed. Two local control panels, each panel controls one electric driven compressor and has local start/stop control. The system uses Series 500 controllers, start/stop push buttons, power on/off switches, status lights for valve and unit status. ESD button, Series 400 controller, and SWITCHGAGE® instruments for shutdown. The system is designed for Class I, Div. 2 Group D areas.

This special physical configuration panel is designed to control a motor driven compressor. It features a MARK III annunciator approved for Class I, Div. 2 areas, status lights, and various SWITCHGAGE® control instruments. The stainless steel enclosure is NEMA 4X type.

This control panel includes a Series 500 logic control platform, status lights, and CS2001 controller/scanner for link with computer supervised system. The base has OPL SWITCHGAGE®s and pulsation dampeners. Enclosure is NEMA 4 type.

This control panel includes weatherproof enclosure, a MARK III fault annunciator and CB32 call box for dialing out on fault condition. It also contains a TDX6 6-point temperature scanner, air start valve, and OPL SWITCHGAGE®s for monitoring process pressures.

This is a local and remote control panel system for fuel gas boosters. The system includes: The remote panel which indicates valve status, monitors system pressures and will start local units as needed. Two local control panels, each panel controls one electric driven compressor and has local start/stop control. The system uses Series 500 controllers, start/stop push buttons, power on/off switches, status lights for valve and unit status. ESD button, Series 400 controller, and SWITCHGAGE® instruments for shutdown. The system is designed for Class I, Div. 2 Group D areas.

This control panel includes a MISTIC Opto-22 controller with Opto-22 I/O modules, DT9800 series tachometer and overspeed switch, HD35 hourmeter. The enclosure meets NEMA 4X specifications.
Murphy’s single components are easily integrated into complete, well-designed systems to meet your control needs. Individual SWITCHGAGE® instruments indicate the cause of alarm and will shut down the compressor should a malfunction occur. A wide variety of pressure, temperature, fluid level, shock and vibration SWITCHGAGE® instruments, and emergency fuel shut-off devices are available to protect against adverse conditions.
Selected models are approved by

**SELECTRONIC®** logic control platform plus. These controllers include standard features not available or only offered as options on PLC's. Well suited to engines and electric motors for pump and compressor environments. Programmed to your requirements. Trip points are field configurable. Compatible with **SWICH GAGE®** systems. Opto-isolated inputs, real time clock, and communications capability give control platforms flexibility and on-site convenience. Designed for 12/24 VDC, models include up to 40 digital inputs, 32 outputs, 4 analog inputs. Accessory board for additional analog input/output control is available.

Compact **TATTLETALE®** annunciators monitor up to 47 points on engine or motor driven pumps and compressors in hazardous locations. Alarm and shut-down systems for 24, 32 or 47 N.O. and/or N.C. sensor inputs. Sensors can be locked out at start-up to avoid nuisance shut-downs. Highly visible LCD display. Stand alone and built-in power supply available for 120 VAC, 12/24 VDC or CD ignitions systems. All models have backup battery to save trip point settings when power is lost. CSA, FM, NRTL/C approved. Available for Class 1, Division 1 or 2 hazardous locations. Models offer optional BCD communications port for computer interface.

**Murphy's PID controllers and software** can be linked to IBM ® PC compatible computer supervised systems. **MURSOFT™ CS** data acquisition software offers graphic trending, process displays, alarm/data logging. Print out or store in text or Lotus compatible files. Alphanumeric display makes these controllers great stand alone units. They offer four alarms per loop. Accept thermocouples, RTD's or 4-20 mA transmitters. For 12/24 VDC or 120/220 VAC systems. Available for up to 64 digital inputs and 12, 16, or 32 analog loops.

**Murphy micro-controllers** for Class I, Division 1 hazardous areas. Alphanumeric display tells in plain language the cause of alarm/shut-down for 32 N.O. or N.C. sensors. Field-configurable annunciator allows you to customize operating parameters. Start/Run and Pre/Post lube timer, available with up to seven control relay outputs all packaged in a 1/4 DIN enclosure. For 120 VAC or 12/24 VDC.
Murphy's oil level maintainers automatically add oil to the crankcase as needed to keep the lube level normal. Models with built-in trip switches are available to alarm or to shut down the equipment should oil make-up supply deplete or overfill conditions exist. Explosion-proof models are available for Class I, Div. 1, Grps. C & D hazardous locations.

Lube level regulators maintain crankcase oil level on small to medium size engines. As oil level drops, the float also drops and opens the THUMB-VALVE™ allowing oil to flow into the crankcase. A built-in low level switch will alarm or shut down the equipment if supply oil is lost.

The lube level, sight SWITCH GAGE® is a combination of lube level indicating gage and low and high limit trip switches. The sight gage allows you to check oil level and condition without shutting down the equipment. The alarm or shut-down trip switches are easy-to-set by turning the two fingertip adjustments.
Murphy's high level switches are used for scrubber level applications. We produce models for Class I, Div. 1, Grps. C & D hazardous locations and all stainless steel models to meet NACE standard M R-01-75 for direct exposure to H2S service. High pressure versions are rated for 1500 psi (10.34 M Pa) [103.4 bar] operating pressure.

Dump valve operators are float operated devices which include a pressure filter/regulator and a pressure MURPHYGAGE®. These units mount directly into scrubber tanks. Their BUOYGLAS™ float is rated 0.50 specific gravity.

These diaphragm-actuated, pneumatically controlled valves open and close automatically by pneumatic control from a dump valve operator. Murphy’s dump valves operate at 30-70 psi (207-483 kPa) [2.07-4.83 bar] with up to 1500 psi (10.3 M Pa) [103.42 bar] vessel pressure.

Select our complete MURPHYMATIC® system for automatic level control of condensate and water in scrubbers.
Temperature SWICH GAGE®s offer visual indication and automatic shut-down switch to monitor engine and compressor coolant temperature. They feature field-adjustable contacts and are available in 2 and 2-1/2 in. diameter (51 and 64 mm) designs. Murphy's temperature SWICH GAGE®s give accurate readings at a quick glance.

These are only two of the many Murphy water temperature SWICH GAGE®s. Used for start/stop and to trip alarms or shut down the compressor, these devices are available in an analog-dial, mechanical design, and also in a digital readout SWICH GAGE® that senses from thermocouples. Both designs, analog dial and digital readout models feature a 4-1/2 in. diameter, (114 mm) faceplate.

Murphy's digital display six-point temperature SWICH GAGE® is ideal for gas and exhaust temperature monitoring. It includes start-up delay, and it is powered by CD ignitions, 120 VAC, 24 VDC. Scans J or K type grounded or ungrounded thermocouples, and it is rated for Class I, Division 2, Group D, hazardous areas.
The exhaust temperature SWICHGAGE's can also be used to indicate overloading or lean fuel mixtures, and to coordinate loads on twin engine installations. Dials are available in degrees C° or F° up to 1000°F (500°C) Hazardous locations, explosion-proof models are available for Class I, Div. 1, Grps. C & D.

Murphy’s thermocouples, RTD’s and 4-20 mA DC output RTD transmitters have a cast aluminum connecting head that meets NEMA 4 requirements and a 304 stainless steel thermowell to protect the spring-loaded element. The terminal block is mounted on ceramic Steatite which is rated NEC Class 2. Complete assemblies are offered in 2-1/2, 4-1/2, or 7-1/2 in. (63, 114, or 191 mm) thermowell insertion lengths.

These semi-automatic fuel shut-off valves are designed for shutdown of natural gas fueled engines. These valves open manually and close when an electromagnet is energized by either a magneto or CD ignition system, or 12/24 V battery, to trip a latch. Murphy offers valves with 1 NPT, 2 NPT, and 2 inch flange pipe connections. Valves with normally energized circuits that hold the valve open and close by interrupting power to a coil are also offered.

Selected models are approved by...
**COOLANT LEVEL**

Murphy's coolant level monitoring SWITCH-GAGE®s are a combination coolant level indicating gage and low limit switch. If the coolant level falls to the low limit set point, the switch closes shutting down the compressor or engine, or it activates an alarm. These float-operated units are one of the many level products available from Murphy. We offer explosion-proof models for Class I, Div. 1, Groups C & D hazardous areas.

**OIL PRESSURE**

Murphy's electromechanical SWITCH-GAGE®s are heavy-duty, pressure monitoring, instruments with 4-1/2 in. (114 mm) dia. dials and bourdon tube movement. Available models feature 2 and 2-1/2 in. (51 and 64 mm) dials, corrosion resistant polycarbonate case and lens, and stainless steel bezel.

Digital display loop monitors are also available. These monitors read a 4-20 mA signal from a transmitter.

Our pressure transmitters and pressure transducers are state-of-the-art instruments. The transmitters provide 4 to 20 mA output signals. The transducers give 1-5 VDC outputs. They feature a precision micro-machined silicon diaphragm with fully welded stainless steel pressure port for greater accuracy, stability, and a wide range of compatibility.
Our shock and vibration switches detect shock/vibration in three planes of motion. They are ideal for engines, pumps, compressors, heat exchangers and anywhere shut-down protection from damaging vibration is needed. The magnetic latch type switch is fully adjustable, and it is enclosed in a weatherproof case (NEMA 3R rated). Manual reset is standard, remote reset option includes electric solenoid that allows resetting the tripped unit from a remote location.

Explosion-proof models for Class I, Division 1, Groups C & D hazardous locations are also available. These models feature NEMA 7 type enclosures.

These shock and vibration control switches are designed to shut-down the compressor before serious damage can occur. Fine sensitivity is obtained by adjusting the magnetic latch. These models are housed in a NEMA 4/4X glass-filled polyester enclosure and are ideal for non-hazardous location applications. Remote reset options are available as well as start-up time delay and moisture/condensation prevention space heater.
Murphy offers high force, DC solenoids for diesel engines. These push or pull operation devices can shut down or throttle an engine. Models are available that give a full 1 inch stroke at 11 pounds/holds 23 pound; or 1-1/2 inch stroke at 14 pounds/holds 34 pounds. Reliable external switching available for 12 or 24 VDC.

Semi-automatic rack pullers to initiate shutdown of diesel engines are also available. These devices connect to the injection pump or air intake shut-off lever via a cable (or chain). When a malfunction is detected, the rack puller electromagnetic circuit is interrupted pulling the cable (chain) to actuate the shutdown. Models are available for 12 or 24 VDC applications and are compatible with all SWITCH GAGE® instruments.

Murphy's electric motor driven clutch operators can engage and disengage the clutch automatically. These devices can be used for opening and closing pipeline valves, engagement and disengagement of pumps, fixture position and automated process control. Their screw-type actuator is fully adjustable to up to 6 inches (152 mm) in length. Available for 12 or 24 VDC operations and fully compatible with Murphy controllers.

These heavy-duty, completely reliable devices are developed to automatically control engine speed to meet system demand. Their low-current, high-torque, solid-state switching allows for speed changes to be made slowly and smoothly. These engine throttle controllers are perfect for warmup and cooldown on automated systems. When used with Murphy SWITCH GAGE®s, near constant pressure, level, and overload can be maintained.