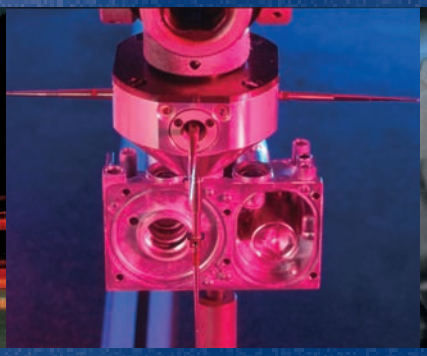
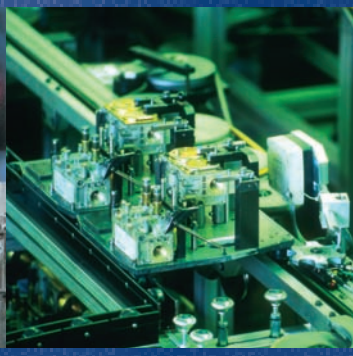
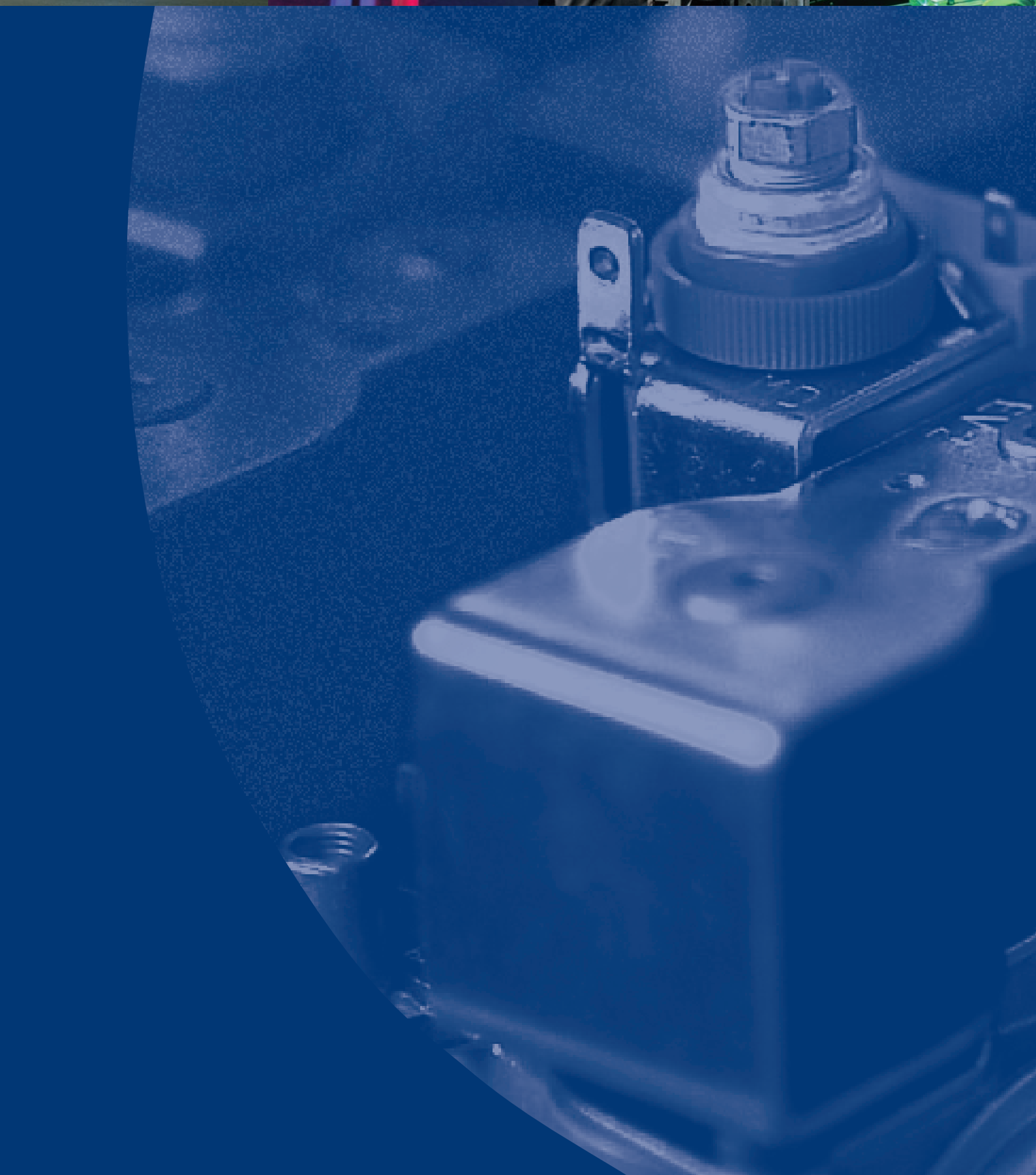
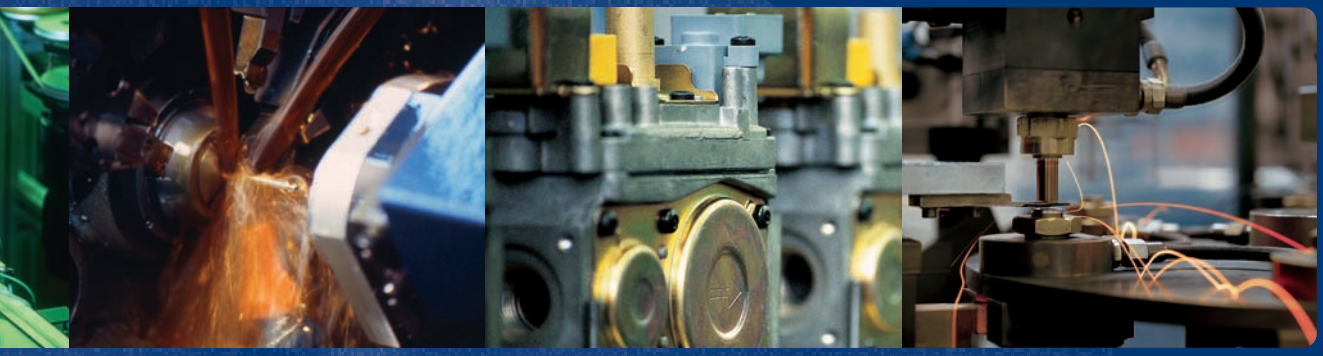
SIT Group

PRODUCT RANGE


SIT Group




SIT Group, with head office in Padua (Northern Italy) and industrial and commercial presence in Europe, America, Asia and Australia, is a world leader in the combustion control systems for domestic heating, commercial cooking and large household appliances.

The range of SIT products includes electromechanical and electronic gas controls, air/gas mixers, combustion sensors, pressure switches, as well as fans and exhaust kits marketed under the trademark LN.

LN designs, manufactures and markets a broad range of heating appliance products such as electric fans and fume exhaust kits for atmospheric and condensing boilers. It also manufactures range hoods for domestic cooker hoods and other applications.

SIT offers therefore a complete range of technologically advanced solutions, designed by specialists and certified by the world's most prestigious approval institutes.

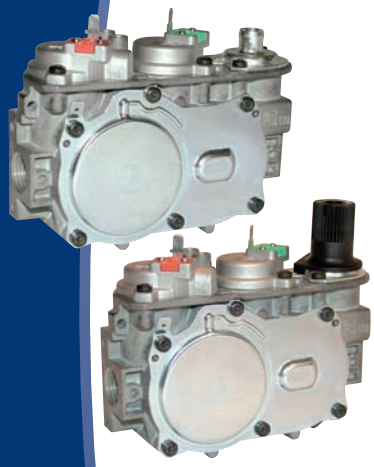
SIT's systems for safety, control and regulation are suitable for a large number of applications: wall-mounted and free-standing boilers, room heaters, fireplaces, patio heaters, instantaneous and storage water heaters, domestic and commercial cooking, heating systems for recreational vehicles and appliances for catering like ovens, fryers, bain maries as well as new generation appliances like pellet stoves, heat pumps, heat recovery and co-generation units.

Technical progress, careful supervision of the manufacturing process and customer satisfaction is the service that SIT, the specialist in the sector, offers and guarantees at the highest level.

Quality Management System certified according to ISO 9001.

MULTIFUNCTIONAL CONTROLS
ELECTRICAL ON-OFF

This group of products performs the ON-OFF control of the main gas flow using automatic shut-off valves supplied by thermopile or by external electrical energy.
These controls are suitable for room heaters, fireplaces, central heating boilers, furnaces, water heaters and catering appliances.



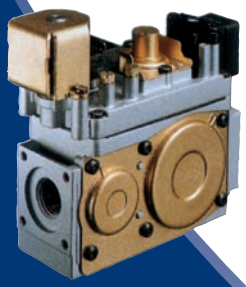
880-886 PROFLAME

Multifunctional control with two battery operated automatic shut-off valves and a servo pressure regulator. Electronic driven system operated by normal switches or through remote control for ignition and flame supervision. Possibility to decide permanent or intermittent pilot operation.
Main maximum outlet pressure adjustment (only for 880 Proflame) and pilot flow adjustment are available.

880 Proflame - ON-OFF operation
886 Proflame - manual adjustment of the outlet pressure

840 SIGMA

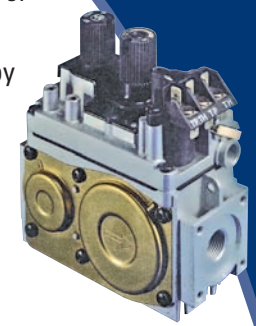
Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and ramped opening (optional).
The plungers of the automatic shut-off valves are protected by an oil bath allowing a particularly silent operation of the valves.
Main outlet pressure adjustment and slow opening pressure adjustment are available.
Gas inlet and outlet male thread or, as alternative, flange connections or female thread.



822 NOVA

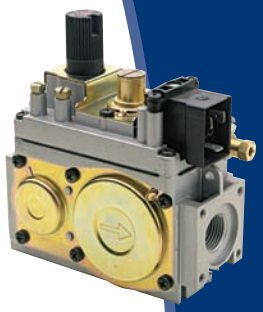
Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and step opening device (optional).
The plungers of the automatic shut-off valves are protected by an oil bath allowing particularly silent operation of the valves.
Pilot outlet flow adjustment and main outlet pressure adjustment are available.

820 NOVA mV



Multifunctional gas control with single operating knob (OFF, pilot, ON), thermoelectric flame supervision device, restart interlock, servo pressure regulator, manual adjustment of the outlet pressure, automatic shut-off valve and step opening device (optional).
The automatic shut-off valve provides particularly silent operation and is supplied by thermopile, without requiring external electrical energy.
Pilot outlet flow is adjustable.
The conversion kit, to replace the manual adjustment of the outlet pressure with a step motor modulating operator, is available.

820 NOVA



Multifunctional gas control with single operating knob (OFF, pilot, ON), thermoelectric flame supervision device, restart interlock, servo pressure regulator, automatic shut-off valve and step opening device (optional).
The plunger of the automatic shut-off valve is protected by an oil bath allowing particularly silent operation of the valve.
Pilot outlet flow and main outlet pressure adjustment are available.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
820 NOVA				●			●					
820 NOVA mV		●		●			●		●			
822 NOVA				●			●					
840 SIGMA	●	●		●			●					
880-886 PROFLAME									●			

MULTIFUNCTIONAL CONTROLS ELECTRICAL MODULATION

In addition to one or two automatic shut-off valves, this family of products includes an electric device for the regulation of the gas flow (modulator).
Versions are available with thermoelectric or automatic flame supervision device.
These controls are particularly suitable for low thermal inertia appliances where careful temperature control is required (instantaneous water heaters, combi boilers, etc.) or, in general, where it is necessary to modulate the gas flow by an electrical command.

824 NOVA

Multifunctional gas control with single operating knob (OFF, pilot, ON), thermoelectric flame supervision device, restart interlock, servo pressure regulator, automatic shut-off valve, electric modulating device controlling the main gas flow by 2 levels modulation and step opening device (optional). The plunger of the automatic shut-off valve is protected by an oil bath allowing particularly silent operation of the valve.
Pilot outlet flow, minimum and maximum main outlet pressure adjustments are available.

825 NOVA

Multifunctional gas control with single operating knob (OFF, pilot, ON), thermoelectric flame supervision device, restart interlock, servo pressure regulator, automatic shut-off valve, electric modulating device controlling the main gas flow by full modulation and step opening device (optional). The plunger of the automatic shut-off valve is protected by an oil bath allowing particularly silent operation of the valve.
Pilot outlet flow, minimum and maximum main outlet pressure adjustments are available.

THERMOELECTRIC FLAME SUPERVISION

AUTOMATIC FLAME SUPERVISION

885 PROFLAME

Multifunctional control with two battery operated automatic shut-off valves, a servo pressure regulator and an electric modulating device controlling the main gas flow. Electronic driven system operated by normal switches or through remote control for ignition, flame supervision and modulation. Possibility to decide permanent or intermittent pilot operation. Pilot flow adjustment is available.

843 SIGMA

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and electric modulating device controlling the main gas flow by 2 levels modulation.
The plungers of the automatic shut-off valves are protected by an oil bath allowing particularly silent operation of the valves. Minimum and maximum main outlet pressure adjustments are available. Gas inlet and outlet male thread or, as alternative, flange connections or female thread.

845 SIGMA

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and electric modulating device controlling the main gas flow by full modulation.
The plungers of the automatic shut-off valves are protected by an oil bath allowing particularly silent operation of the valves. Minimum and maximum main outlet pressure adjustments are available. Gas inlet and outlet male thread or, as alternative, flange connections or female thread.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
824 NOVA	●			●			●					
825 NOVA	●			●			●					
843 SIGMA	●	●					●		●			
845 SIGMA	●	●	●	●	●		●					
885 PROFLAME									●			

MULTIFUNCTIONAL CONTROLS
AIR/GAS MODULATION

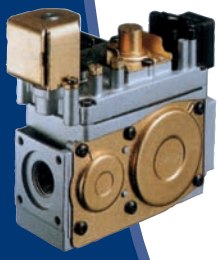
SIT air-gas controls are equipped with an air-gas modulator: a pneumatic device that controls the gas flow in a proportion to the combustion air.
They have been designed for high-efficiency appliances that require a precise control of combustion throughout the power range.

991 AEROTECH

AEROTECH is an integrated system that performs the air/gas flow control and mixing. It consists of a multifunctional gas control with two automatic shut-off valves, an air/gas modulator with ratio adjuster (848 SIGMA) and a mixing device (391 AGM) with air conveyer.
Various mounting options are available.

848 SIGMA

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and pneumatic modulator with 1:1 air-gas pressure ratio. The plungers of the automatic shut-off valves are protected by an oil bath allowing particularly silent operation of the valves. Offset level and air/gas ratio adjustments are available. Gas inlet and outlet male thread or, as alternative, flange connections or female thread.



822 NOVAMIX

Multifunctional gas control with two automatic shut-off valves and a pneumatic modulator with 1:1 air-gas pressure ratio.
The plungers of the automatic shut-off valves are protected by an oil bath allowing particularly silent operation of the valves.
Offset level and air/gas ratio adjustments are available.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
822 NOVAMIX			●	●	●	●						
848 SIGMA	●		●	●	●		●			●		
991 AEROTECH					●	●						

AUTOMATIC FLAME SUPERVISION

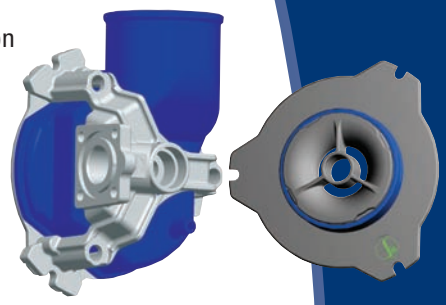
MIXER

The MIXER, AGM and AEROTECH-HM are particularly suitable to work in conjunction with SIT air-gas multifunctional controls to equip fan-assisted appliances using premix burners.

390 MIXER

Gas and air mixing system control suitable for middle power gas appliances with large modulation range.
Various mounting options to the fan and to the gas valve are available.

391 AGM



Gas and air mixing system control. The intake airflow adjustment allows the optimization of the modulation range of the appliance.
It has compact dimensions with an extremely straightforward integration onto the fan.
It is also available the air conveyer and the gas manifold.

392 AGM

Gas and air mixing system control suitable for high power gas appliances.
It has compact dimensions with an extremely straightforward integration onto the fan.

991 HM AEROTECH

Electrically operated gas-air two stage mixing control system suitable for high modulating range appliances. Device designed to be connected onto the fan air intake. Gas inlet is available with male thread or, as alternative, with quick fit and nut connection.

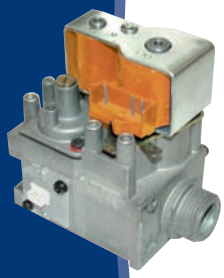
	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
390 MIXER						●						
391 AGM						●						
392 AGM						●						
991 HM AEROTECH				●	●	●						

MULTIFUNCTIONAL CONTROLS FOR CHP APPLIANCES

This group of products is specifically customized for appliances using gas supplied Fuel Cell and controls gas flow in the range below 15 slm. Gas inlet and outlet are available with male thread or, as alternative, flange connections or female thread. Automatic shut-off valves can be supplied at mains voltage or at low voltage, AC or DC versions. The plungers of the valves are protected by an oil bath allowing particularly silent operation.

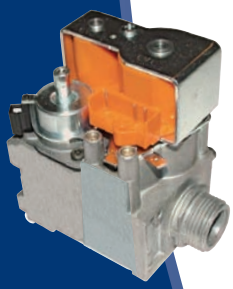
848 SIGMA µCHP

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and pneumatic modulator with 1:1 air-gas pressure ratio. Offset level and air/gas ratio adjustments are available.



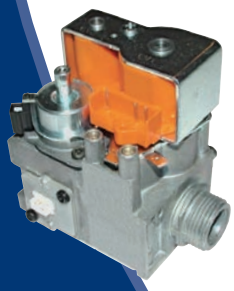
848 SIGMA µCHP-S

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator, pneumatic modulator with 1:1 air-gas pressure ratio and integrated gas flow sensor with digital output. Offset level adjustment is available.



849 SIGMA µCHP

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator and current controlled modulating device. The modulating device is realized with a frictionless electromagnetic linear actuator allowing low hysteresis and supplied at extremely low power.



849 SIGMA µCHP-S

Multifunctional gas control with two automatic shut-off valves, servo pressure regulator, current controlled modulating device and integrated gas flow sensor with digital output. The modulating device is realized with a frictionless electromagnetic linear actuator allowing low hysteresis and supplied at extremely low power.

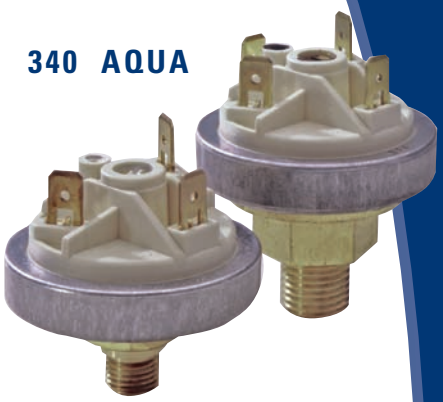
	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
848 SIGMA µCHP										●		
848 SIGMA µCHP-S										●		
849 SIGMA µCHP										●		
849 SIGMA µCHP-S										●		

PRESSURE SWITCHES

The range includes air differential pressure switches, gas pressure switches (also in adjustable version) and gas pressure switches.
Models with different pneumatic connections and mounting solutions are available.

310 GAS

340 AQUA



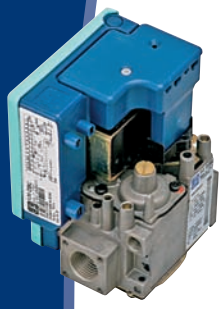
360 PRESCAL

380 ARIA

ELECTRONIC CONTROLS

SIT electronic controls include a wide range of products such as Control and regulation systems for boilers, general purpose Automatic Burner Control Systems, integrated control for boilers, room thermostats, remote controls for fireplaces.
These products, thanks to their versatility, have multiple applications and allow the appliance manufacturer considerable freedom in design.

579 DBC

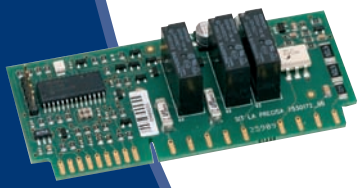


The 579 Digital Burner Control is a family of electronic devices with integrated functions for the safety and the control of combustion in gas appliances.
The 579 DBC is dedicated in particular to boilers, water heaters and hot air furnaces for both natural draught or fan assisted burners.
The 579 DBC family of products has been specifically designed for fixing on SIT 840, 845 and 848 SIGMA multifunctional controls by means of an exclusive plastic box which integrates itself with the valve body and simplifies the connection of the solenoid valves.

571 DBC

The 571 Digital Burner Control is a family of electronic devices with integrated functions for the safety and the control of combustion in gas appliances and is the stand-alone version of the 579 DBC.
The 571 DBC is dedicated in particular to boilers, water heaters, hot air furnaces and blacktube radiant heaters for both natural draught or fan assisted burners that are being ignited either through a spark or hot surface igniter.
The 571 DBC family of products has been specifically designed for random fitting in an appliance by means of easy access fixings.

SAFETY UNIT



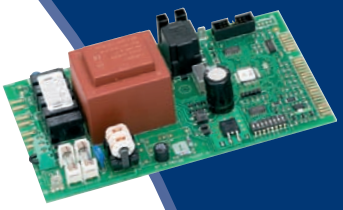
Ignition module with basic safety functions for use in combination with a separate controls board.
The module can be used integrated in the main board or as a separate solution.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
579 DBC	●	●	●	●	●	●	●		●			
571 DBC	●	●	●	●	●	●	●		●			
SAFETY UNIT				●	●	●						
584 DFC									●			
580 BIC	●		●	●	●							
585.100 BIC	●		●	●	●	●						
585.200 BIC	●		●	●	●	●						
585.300 BIC	●		●	●	●	●						
582 HRC	●			●	●	●						

584 DFC

584 DFC is an automatic burner control specifically designed to be used in conjunction with 880, 885 and 886 Proflame valves and optionally with 584 Proflame systems. It is supplied at low DC voltage or by batteries and can be programmed for Intermittent or Permanent Pilot operations.

580 BIC

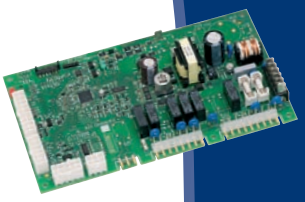


580 BIC is an electronic board that integrates both the Automatic Burner Control and temperature controls programs for gas-fired appliances (non condensing and using a conventional combustion fan). It was developed with digital microprocessor technology and can be controlled by a remote chrono-thermostat.

585.100 BIC

The 585.100 BIC is designed for mono or bi-thermic heat exchangers. It has an on-board igniter and can be connected to either a LCD or LED display module. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. The control also includes a modulating fan in order for the efficiency of the boiler to be as high as possible. In order to verify the correct operation of the control a PC-diagnostics port is provided in the control. The board is configurable for both atmospheric as well condensing appliances.

585.200 BIC



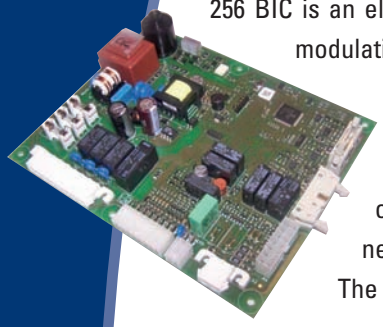
The 580.200 BIC is designed for mono or bi-thermic heat exchangers. It has an on-board igniter and can be connected to either a LCD or LED display module. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. The control also includes a modulating fan in order for the efficiency of the boiler to be as high a possible. In order to verify the correct operation of the control a PC-diagnostics port is provided in the control. The board is configurable for both atmospheric as well condensing appliances. The difference with the 585.100 series is that this version has more I/O available for thermistors and high voltage outputs.

585.300 BIC

The 585.300 BIC is designed for mono or bi-thermic heat exchangers. It has an on-board igniter and can be connected to either a LCD or LED display module. This board features a special hardware that is used for driving an EC-motor directly instead of using an electronic board on the motor. This allows the appliance manufacturer extra flexibility with respect to the design. In order to verify the correct operation of the control a PC-diagnostics port is provided in the control. An additional difference to the 585.100 and 585.200 series is that this control has enough inputs and outputs to also allow connection for a second heating zone.

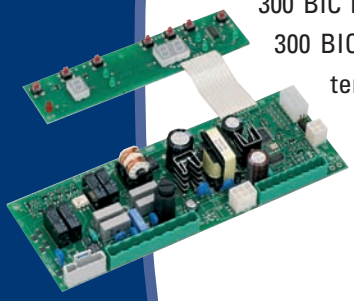
ELECTRONIC CONTROLS

256 BIC



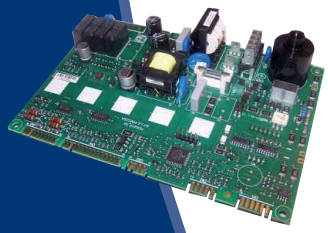
256 BIC is an electronic control device specifically designed for condensing gas-air combi boilers with a modulating fan. The control integrates the functions of Automatic Burner Control with the gas appliance regulating and control functions together with the fan driver electronics. 256 BIC is intended to be used on boilers with instantaneous sanitary hot water production or with external tank. The control is suitable to be connected to a standard on-off room thermostat or to an OpenTherm compatible room control. Other features include the possibility to connect the external temperature sensor for the control of the central heating water temperature. The working parameters are completely programmable through a PC.

300 BIC



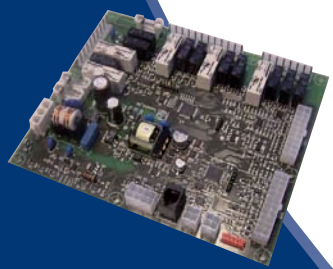
300 BIC is a combined safety and control board, designed for condensing boilers using a premix burner. 300 BIC is a highly versatile product that allows the customization of the comfort functions, such as temperature control, the management of an external storage system, the control of under floor systems, optimizing, at the same time, the performance/cost ratio.

335 BIC



335 BIC is a combined safety and control board, designed for condensing boilers using a premix burner. The BIC is a highly versatile product that allows the customization of the comfort functions, such as temperature control, the management of an external storage system, the control of under-floor systems, optimizing, at the same time, the performance/cost ratio. Also the control features the integrated OpenTherm protocol.

900 BIC



900 BIC is an electronic control device with micro controller specifically designed for condensing gas-air combi boilers with modulating fan.

900 BIC integrates the functions of Automatic Burner Control with the gas appliance regulating and control functions. Versions are available for the production of instantaneous hot water or with storage tank.

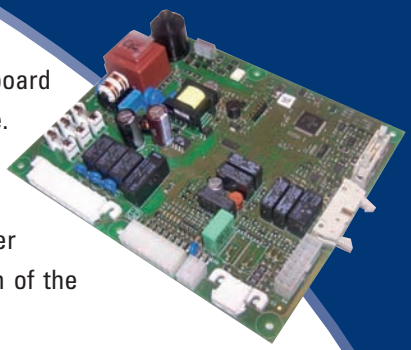
The control is designed for installations with standard on-off room thermostat or an Open Therm compatible thermostat.

Other features include the possibility to connect the external temperature sensor for the control of the water temperature of the central heating mode. Also included is a cascade control for many of the boards in this family of products.

PC diagnostic connection is available.

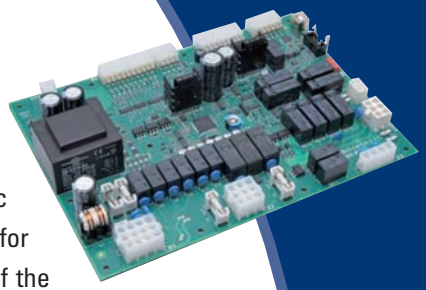
900 BIC is designed to be used with a display from the 9xx series (touch screen, true text or LED options).

938 BIC



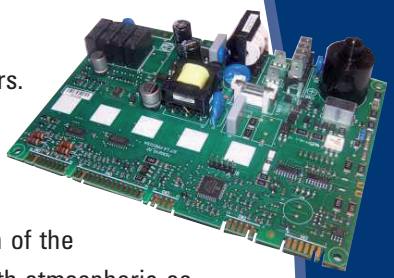
The 938 BIC is designed for CH and DHW systems. It has an on-board igniter and can be connected to either a LCD or LED display module. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. The control also includes a modulating fan in order for the efficiency of the boiler to be as high as possible. In order to verify the correct operation of the control a Modbus diagnostics port is provided in the control.

939 BIC



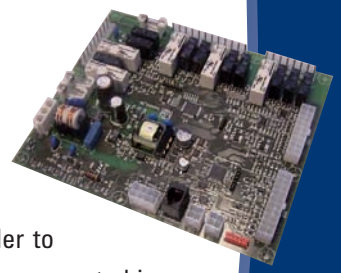
The 939 BIC is designed for CH and DHW systems. It has an on-board igniter or a hot surface can be used. It can be connected to a color dot matrix touch display module. The board can control 4 gas valves and two modulating fans in order for the efficiency of the boiler to be as high as possible. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. An interface for a Building Management System is available. In order to verify the correct operation of the control a PC-diagnostics port is provided in the control.

0.580.150 BIC



The 0580.150 BIC is designed for CH and DHW systems, mono or bi-thermic heat exchangers. It has an on-board igniter and can be connected to either a LCD or LED display module. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. The control also includes a modulating fan in order for the efficiency of the boiler to be as high as possible. In order to verify the correct operation of the control a PC-diagnostics port is provided in the control. The board is configurable for both atmospheric as well as condensing appliances.

0.580.153 BIC



The 0580.153 BIC is designed for CH and DHW systems, mono or bi-thermic heat exchangers. It has an on-board igniter and can be connected to a LCD chronothermostat display module. For the comfort of the domestic hot water firmware for an external hot water tank program is provided. The control also includes a modulating fan in order for the efficiency of the boiler to be as high as possible. The board is designed for multiburner boilers and every boiler could be connected in cascade. In order to verify the correct operation of the control a Modbus diagnostics port is provided in the control.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
256 BIC						●						
300 BIC						●						
335 BIC						●						
900 BIC						●						
938 BIC						●						
939 BIC						●						
0.580.150 BIC						●						
0.580.153 BIC						●						

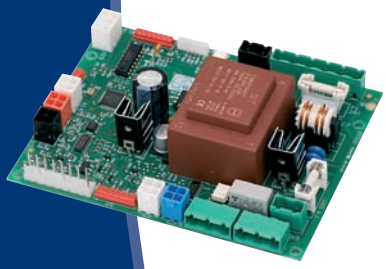
ELECTRONIC CONTROLS

HDC

Electronic microprocessor-controlled room thermostat, with a seven-day program, suitable for management of independent central heating systems. Features: large display, easy installation and straightforward programming.

582 HRC

Heating Remote Control is designed to be connected to the 580 BIC for the remote control of all the operations of a combi boiler. HRC includes a room thermostat with seven-day programming and a large display. It is available with wire or with RF communication.



HRU

This board offers a solution for heat recovery units. The concept is based on a high efficiency heat exchanger that is heating up the air coming from the outside with the air coming from indoors. There are connections for 2 dc-powered fans and 4 thermistors to control the exact fan speed of both fans.

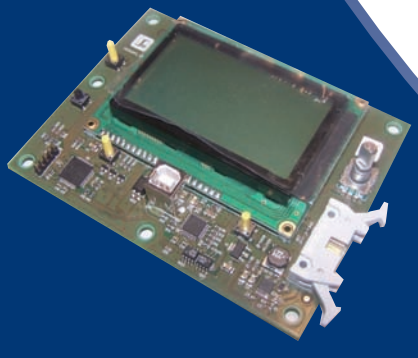
In addition there are functions like anti-freeze, pressure and/or flow control of the air and blocked filter detection.

0.585.572

The board offers a color touch panel for the management of boilers system connected in cascade.

The board can control the status of each boiler in the system and the management of cascade workload.

The menu access is controlled by password and it's possible manage all the parametrs related to the cascade and the parameters related a single boiler.



0.585.579

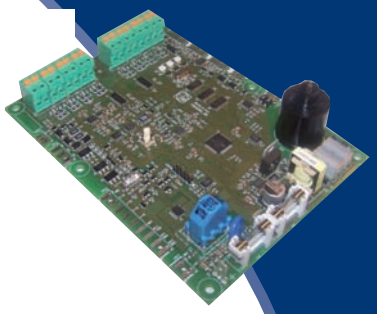
The 0.585.579 is designed to manage medium complexity appliances (multiburner and multiboiler).

A dot matrix display 128x6 and an encoder with four buttons are provided in order to have a user interface easy to use.

An Modbus interface and a USB interface are provided.

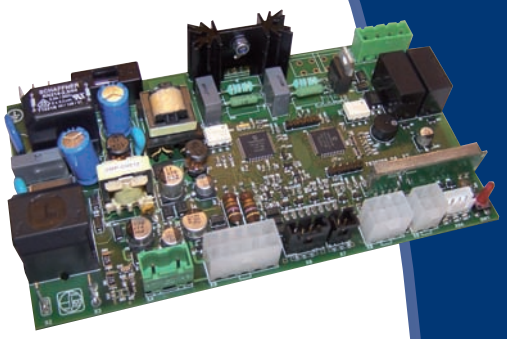
0.589.101

The 0.589.101 is designed for fuel cell appliances.
It provides the safety management of the appliance by the management of measurements from thermocouples and gas and air flow.
In order to verify the correct operation of the control a PC-diagnostic port is provided.



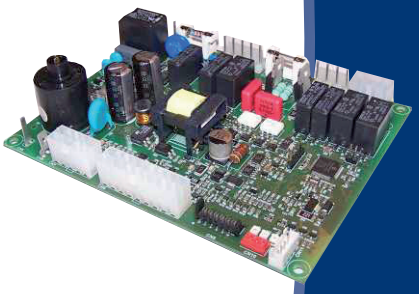
0.584.305

The 0.584.305 is designed for fireplaces gas appliances.
Both the mode Intermittent pilot and continuous pilot are available.
In the board a comfort fan and a combustion fan are available.
The board works with valve and split flow Proflame family.
The ignitor is integrated inside and two auxiliary line power outputs are available.
A knobs plus leds, iconic LCD plus switches, graphics touch screen LCD or a remote control can be used.
In order to verify the correct operations of the control a PC-diagnostic port is provided.



0.584.401

The 0.584.401 is designed for fireplaces gas appliances.
In the board a comfort fan and a combustion fan are available.
The board works with Sigma valves family.
The ignitor is integrated inside .
A knobs plus leds, iconic LCD plus switches, graphics touch screen LCD or a remote control can be used.
In order to verify the correct operation of the control a PC-diagnostic port is provided.



	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
HDC				●	●	●			●			
582 HRC	●			●	●	●						
HRU												●
0.585.572		●	●	●	●	●						
0.585.579		●	●	●	●	●						
0.589.101											●	
0.585.305									●			
0.585.401									●			

ELECTRONIC CONTROLS

The Proflame is a modular remote control system that drives the many functions of today's hearth appliances. In its basic form, it is designed to control the on/off operation of the main burner and to provide thermostatic control of the appliance.

The system can be progressively upgraded to include the control of the flame height, the fan speed, a remote actuated 120V auxiliary outlet. Comfort control is advanced by the Smart thermostat feature which automatically modulates flame height optimizing temperature management and room ambiance. Four different versions are available:

584 PROFLAME GT System

The Proflame GT is designed to control the ON/OFF operation of the main burner and provides thermostatic control of the hearth appliance.

The Proflame is specifically developed to be used together with the 820 NOVA mV multifunctional gas control or the 880 Proflame valve with 584 DFC 300 series Automatic Burner Control battery operated.

584 PROFLAME GTM System

The Proflame GTM is designed to control the on/off main burner operation, its flame levels, and provides on/off and Smart thermostatic control of the hearth appliance.

The Proflame is specifically developed to be used together with the 820 NOVA mV multifunctional gas control converted with the step motor modulating kit or the 885 Proflame valve with 584 DFC Automatic Burner Control battery operated.

584 PROFLAME GTMF System

The Proflame GTMF is designed to control the on/off main burner operation, its flame levels and provides on/off and Smart thermostatic control of the hearth appliance. The system controls a remotely actuated 120V/60Hz power outlet, fan speed through six (6) levels and has a constantly powered outlet.

The Proflame is specifically developed to be used together with the 820 NOVA mV multifunctional gas control converted with the step motor modulating kit or the 885 Proflame valve with 584 DFC Automatic Burner Control with battery back-up.

584 PROFLAME GTMFS System

The Proflame GTMFS is configured to control the on/off main burner operation, its flame levels and provides on/off and Smart thermostatic control of the hearth appliance. In addition to the GTMF this version also supports the Split-Flow feature. This allows the fireplace designer to use a double burner system into a single appliance. The system controls a remotely actuated 120V/60Hz power outlet, fan speed through six (6) levels and has a constantly powered outlet.

The Proflame is specifically developed to be used together with the 820 NOVA mV multifunctional gas control converted with the step motor modulating kit or the 885 Proflame valve with 584 DFC Automatic Burner Control battery operated.

The Proflame 2 is a modular remote control system that directs the functions of a hearth appliance. It is available in Basic, Standard or Complete configurations.

584 PROFLAME 2 BASIC System

The Basic Proflame 2 is an automatic gas ignition control system that includes a selectable intermittent or standing pilot setting. Features include: twin safety system with true flame rectification current detection for enhanced safety and reliability, On/Off, Manual Hi/Low operation from a wall switch, a low power consumption design provides a choice for AC power or AC power with battery back up.

The 880 Proflame gas valve provides basic ON/OFF operation of gas flow to the pilot and main burner of the heating appliance. The 886 Proflame gas valve has the same functions as the 880 gas valve with the added feature of manual flame adjustment by a Hi/Low knob. The Proflame valves have been designed for use with either LPG or Natural Gas and can be converted by use of OEM supplied conversion kits. The 880 Proflame valves can also be upgraded to 886 configurations by installing OEM supplied conversion kits.

584 PROFLAME 2 STANDARD System

The Standard Proflame 2 adds to the Basic Proflame 2 system the control of On/Off and flame height adjustment operation of the main burner, provides also the thermostatic control of the appliance and allows to operate a Split Flow dual burner control. The system features an advanced Smart thermostat which automatically modulates the flame height optimizing the room temperature management. The Standard Proflame 2 system is specifically developed to be used together with the Profame 885 valve and provides for battery back up in the event of line power loss.

584 PROFLAME 2 COMFORT System

The Comfort Proflame 2 adds to the Standard the comfort fan speed control through off to 6 levels, a remotely actuated 120/60Hz power outlet and optional combustion fan control. Comfort control is advanced by the Smart thermostat feature which automatically modulates the flame height optimizing the temperature management and the room ambience. The Complete Proflame 2 system is specifically developed to be used together with the Proflame 885 valve and provides for battery back up in the event of line power loss.

540 SPLIT FLOW PROFLAME

The Split Flow is a device that, used in conjunction with the safety control valve (like the 820mV and 880 Proflame), operates a dual burner fireplaces. It is installed between the safety valve and the two burners. It allows the gas to flow freely to the primary burner and it controls the ON-OFF operation of the secondary burner. The Split Flow is designed for battery operated appliances and particularly is remotely controlled by the Sit GTMS transmitter.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
584 PROFLAME GT									●			
584 PROFLAME GTM									●			
584 PROFLAME GTMF									●			
584 PROFLAME GTMFS									●			
584 PROFLAME 2 BASIC									●			
584 PROFLAME 2 STANDARD									●			
584 PROFLAME 2 COMFORT									●			
540 SPLIT FLOW PROFLAME									●			

THERMOSTATIC CONTROLS

The products of this range are suitable to completely control the operations of water heaters (instantaneous or storage versions), space heaters, gas radiators, furnaces, fryers, ovens, etc.
Electrical mains supply is not required.

600 AC2

Multifunctional control with thermoelectric flame supervision device, ON-OFF thermostat and setting temperature knob.
This control is particularly suitable to equip storage water heaters and does not require external electrical power supply.
It is also possible to mount a piezo igniter.

610 AC3

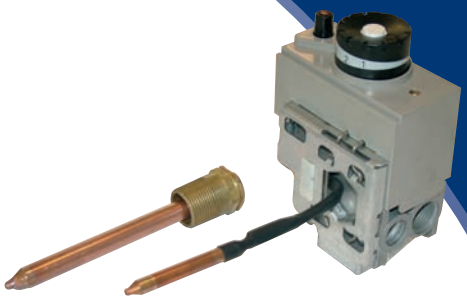
Multifunctional control with thermoelectric flame supervision device, equipped with pressure regulator, ON-OFF thermostat, safety overheat thermostat and setting temperature knob.
Pilot outlet gas flow adjustment and main outlet pressure adjustment with exclusion device are available.
This control is particularly suitable for storage water heaters and does not require an external electrical power supply.

650 DELTA

Multifunctional control with thermoelectric flame supervision device, equipped with servo pressure regulator for superior regulation through a wide operating range, ON-OFF thermostat, safety overheat thermostat, setting temperature knob and integrated and independent pilot pressure regulator.
Pilot outlet gas flow adjustment and main outlet pressure adjustment with exclusion device are available.
This multifunctional control is particularly suitable for storage water heaters and does not require an external electrical power supply.
Available integral piezo ignition and plastic cover: an attractive design, that can also be customised.

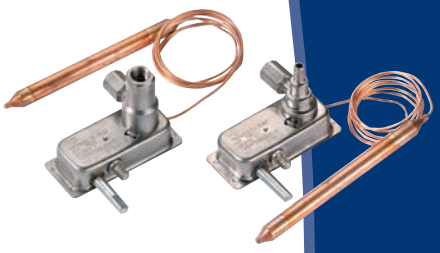
ON-OFF THERMOSTAT

630 EUROSIT SWH



Single-knob multifunctional control (OFF, pilot, temperature selection) with thermoelectric flame supervision device, restart interlock, ON-OFF thermostat, and safety overheat thermostat and pressure regulator.
On request it is possible to mount a piezo igniter, in this case the ignition interlock is available as an alternative to the restart interlock.
Pilot outlet gas flow adjustment and main outlet pressure adjustment are available.
This control is particularly suitable for storage water heaters and does not require external electrical power supply.
It offers the possibility to separate the valve body from the thermostat flange, allowing quick and reliable assembly.

3000-3400 THERMOSELECTOR



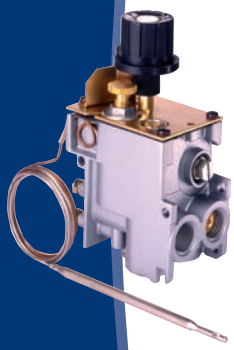
ON-OFF adjustable thermostat normally mounted downstream of a thermoelectric flame supervision device.
This control is particularly suitable for portable LP gas appliances. Low (3000) and high (3400) gas flow versions.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
600 AC2		●										
610 AC3		●										
630 EUROSIT SWH		●										
650 DELTA		●										
3000-3400 THERMOSELECTOR	●								●			

THERMOSTATIC CONTROLS

630 EUROSIT

Single-knob multifunctional control (OFF, pilot, temperature selection) with thermoelectric flame supervision device, restart or, otherwise, ignition interlock, modulating ON-OFF thermostat, pressure regulator or, otherwise, flow adjuster.
It is also possible to mount a piezo igniter; in this case the ignition interlock is available as alternative to the restart interlock.
Pilot outlet gas flow, minimum and maximum main outlet pressure adjustments are available.
Lateral or bottom inlet and outlet gas connections.



630 EUROSIT 120°

Single-knob multifunctional control (OFF, pilot, temperature selection) with thermoelectric flame supervision device, modulating ON-OFF thermostat, pressure regulator or, otherwise, flow adjuster.
This control is particularly suitable to be used in catering appliances, no external electric power supply is necessary and the range of working temperature is extended until 120 °C.
Pilot outlet gas flow, minimum and maximum main outlet flow adjustments are available.
Lateral or bottom inlet and outlet gas connections.

630 EUROSIT PLUS

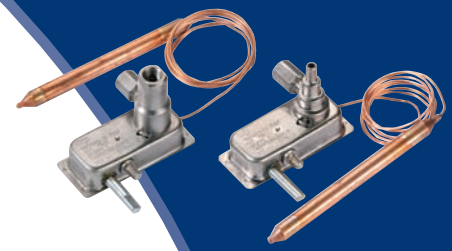
Multifunctional control suitable for two independent burners, with thermoelectric flame supervision device and with restart interlock, pressure regulator or, otherwise, flow adjuster.
The main outlet is controlled by a modulating ON-OFF thermostat, with temperature setting knob, the auxiliary outlet is operated manually.
On request it is possible to mount a piezo igniter.
Pilot outlet gas flow, minimum and maximum main outlet pressure, minimum and maximum auxiliary outlet flow adjustments are available.
Lateral or bottom inlet and outlet gas connections; lateral auxiliary outlet.

710 MINISIT

Multifunctional control with thermoelectric flame supervision device with restart interlock, modulating ON-OFF thermostat with temperature setting knob, pressure regulator or, otherwise, flow adjuster.
It is also possible to mount a piezo igniter.
Pilot outlet gas flow, minimum and maximum main outlet pressure (flow) adjustments are available.
In line inlet and outlet or bottom outlet gas connections.

MODULATING ON-OFF THERMOSTAT

3200-3600 THERMOSELECTOR

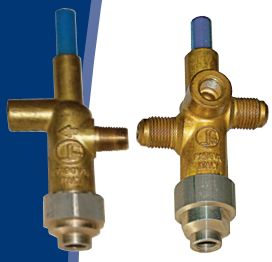


Modulating adjustable thermostat normally mounted downstream of a thermoelectric flame supervision device.
This control is particularly suitable for portable LP gas appliances. Low (3200) and high (3600) gas flow versions.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
630 EUROSIT	●						●		●			
630 EUROSIT 120°	●						●					
630 EUROSIT PLUS	●								●			
710 MINISIT	●	●	●	●			●		●			
3200-3600 THERMOSELECTOR	●											

MANUAL CONTROLS

These products are particularly suitable for the appliances (ovens, space heaters, barbecues etc.) where there is a requirement for a thermoelectric flame supervision device, followed by a manual control of the gas flow, continuously by rotating the knob.



400 M1 - 420 B3

Thermoelectric flame supervision devices with push button with pilot outlet (B3 series) or without (M1 series), available in a wide range of gas connections.
Versions for high working temperature or pressure are available.

630 EUROSIT MANUAL

Single-knob multifunctional control (OFF, pilot, continuous gas flow selection) with thermoelectric flame supervision device, restart interlock, pressure regulator or, otherwise, flow adjuster.
It is also possible to mount a piezo igniter.
Pilot outlet gas flow, minimum and maximum main outlet pressure (flow) adjustment are available.
Lateral or bottom inlet and outlet gas connections.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
400 M1 - 420 B3	●						●		●			
630 EUROSIT MANUAL	●						●		●			

FLUE EXHAUST SYSTEMS

These products are designed for use in various types of heating installation.
The range includes extensions, elbows with different curvatures and various adapters specifically designed and tested to comply with the safety standards of the various gas appliances and complying also the most stringent aerodynamic requirements.
Products are available in various materials In conformity with the present standards for chimneys and flue systems.

The flue systems for appliances with atmospheric burner are available for both concentric and separate ducts with vertical outlet (roof piping) and horizontal outlet (wall duct).
Products are available in various materials such as aluminium, aluminised or galvanised sheet metal (with natural finish or painted in various colours) and stainless steel.

VERTICAL

TELESCOPIC

TWIN

HORIZONTAL

FLUE EXHAUST SYSTEMS

Condensing boilers require different characteristics than traditional boilers, both in terms of the materials used and the specifications.

The lower exhaust fume temperatures have led to the widespread use of self-extinguishing plastic.

The flue systems for condensing appliances are available for both concentric and separate ducts with roof outlet and wall outlet.

Products are available in various materials such as aluminium, plastic, aluminised or galvanised sheet metal (with natural finish or painted in various colours) and stainless steel.

Available a wide range of Siphons in order to collect and discharge condenses out of boilers and other appliances.

The range includes siphons with and without float. The aim of the float is to prevent the flow of flues from the combustion chamber and maintain the air tightness of the combustion chamber, even when the boiler has been off for a long time, when the liquid in the siphon has evaporated and in case of first ignition of the boiler.

Available a new product line of Clape'- Cascade to manufacture the flue exaust system for condensing boilers in cascade up to 4 modules of 50 kW.

The system, manufactured in plastic materials, polypropylene suitable for this application meets the regulations in place such as the EN 483, EN 14471.

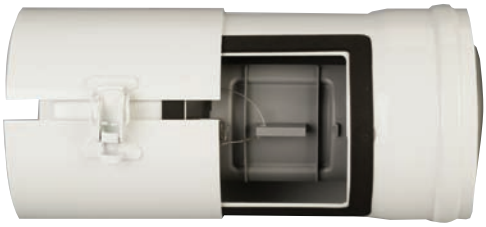
The needed pipes will have diameters ranging from 110 mm to 200 mm.

Fittings, adapters, plugs and condensing drains will be also included the range.

An integral part of the system is the safety valve.

VERTICAL

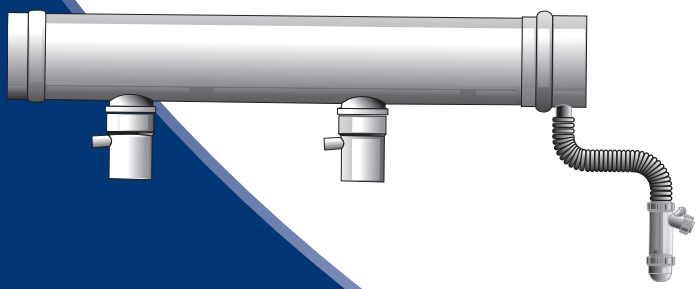
PIPE WITH INSPECTION



OUTLET TERMINAL

HORIZONTAL

CLAPE'- CASCADE

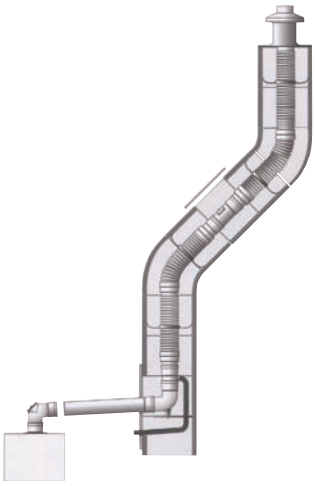


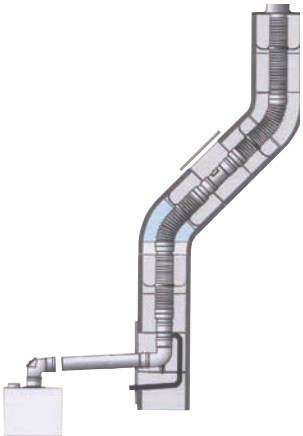
SIPHONS

OUTLET TUBED SYSTEMS

Available exclusively for condensing boilers, made from self-extinguishing polypropylene and for use with rigid or flexible ducts.
A wide range of components is also available for this system, including elbows, extensions, adapters and brackets to facilitate installation and meet the demands of different applications.

FLEXIBLE OUTLET





RIGID OUTLET

ELECTRIC FANS

NG40

NG40 series is specifically developed for condensing boilers with premix burners. Fitted with brushless DC motor, the design of the blower allows to be used in appliances with zero governor and positive pressure air-gas systems.
The blower delivers high pressure (up to 3,000 Pa) and can guarantee wide modulation range up to 10:1. NG40 uses SIT developed electronics equipped with a programmable microcontroller managing several functional curves therefore NG40 can be easily fitted to a wide range of applications.
Three main models are available:

- Controlled by 230 V AC electronic board
- Controlled by 24 V DC electronic board
- Without electronic board, with Hall sensor only.

GOLD – EV

GOLD and EV series are electric fans for fume extraction to be used in standard efficiency gas-fired appliances.
These devices are equipped with a shaded poles motor with power of 25 W up to 65 W @ 230 VAC and can be easily fitted to a wide range of applications thanks to the numerous possible combinations of scroll and impeller size, scroll material (aluminized steel, die cast aluminium), fixing points, pressure sensor (Venturi, Pitot probe, straight probe).

FUME EXTRACTION

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
NG40			●			●						
GOLD - EV			●	●	●							●

ELECTRIC FANS

PL20

Fan designed to deliver pressure up to 300 Pa with 140 m3/h air flow equipped with capacitor motor with a power of 35W @ 230VAC and suitable to equip appliance powers from 5 to 20 kW. The outlet flange (Φ80 mm) and the fixing brackets can be customized; versions with integral Hall sensor are available.

PL21

Fan designed to deliver pressure up to 300 Pa with 140 m3/h air flow equipped with shaded poles motor with a power of 50W @ 230VAC and suitable to equip appliance powers from 5 to 20 kW. The outlet flange (Φ80 mm) and the fixing brackets can be customized; versions with integral Hall sensor are available.

PL30

Fan developed for high power heaters and pellet stoves; it delivers pressure up to 500 Pa with around 280 m3/h air flow. The fan is provided with aluminized steel scroll case and the outlet flange has a diameter 100 mm. PL30 is equipped with capacitor motor with a power of 70 W @ 230VAC and it is also available in the version with integral Hall sensor.

	SPACE HEATERS	STORAGE WATER HEATERS	INSTANTANEOUS WATER HEATERS	FREE STANDING BOILERS	MODULATING BOILERS	CONDENSING BOILERS	CATERING APPLIANCES	PELLET STOVES	GAS FIREPLACES	µCHP APPLIANCES	FUELL CELLS	HIGH EFFICIENCY VENTILATION
PL 20								●				
PL 21								●				
PL 30								●				

INNOVATIVE INTEGRATED COMBUSTION SYSTEMS

These new families of control systems for central heating and combi condensing boilers provide higher performances, simpler appliance manufacturing and installation operations. They also comply with rapidly evolving standards to optimize the appliance design and performances through combustion control systems.

SONNENBLUME

Sonnenblume is an innovative integrated and extremely compact gas combustion system for condensing boilers with capacity range up to 40 kW maximum and 10:1 turn-down capability.

The heat engine is designed to be applied in the heart of the most advanced condensing boilers, and it integrates in a single, compact and unique product all the functions of multiple components like fan, gas mixer, burner and heat exchanger door flange and related accessories.

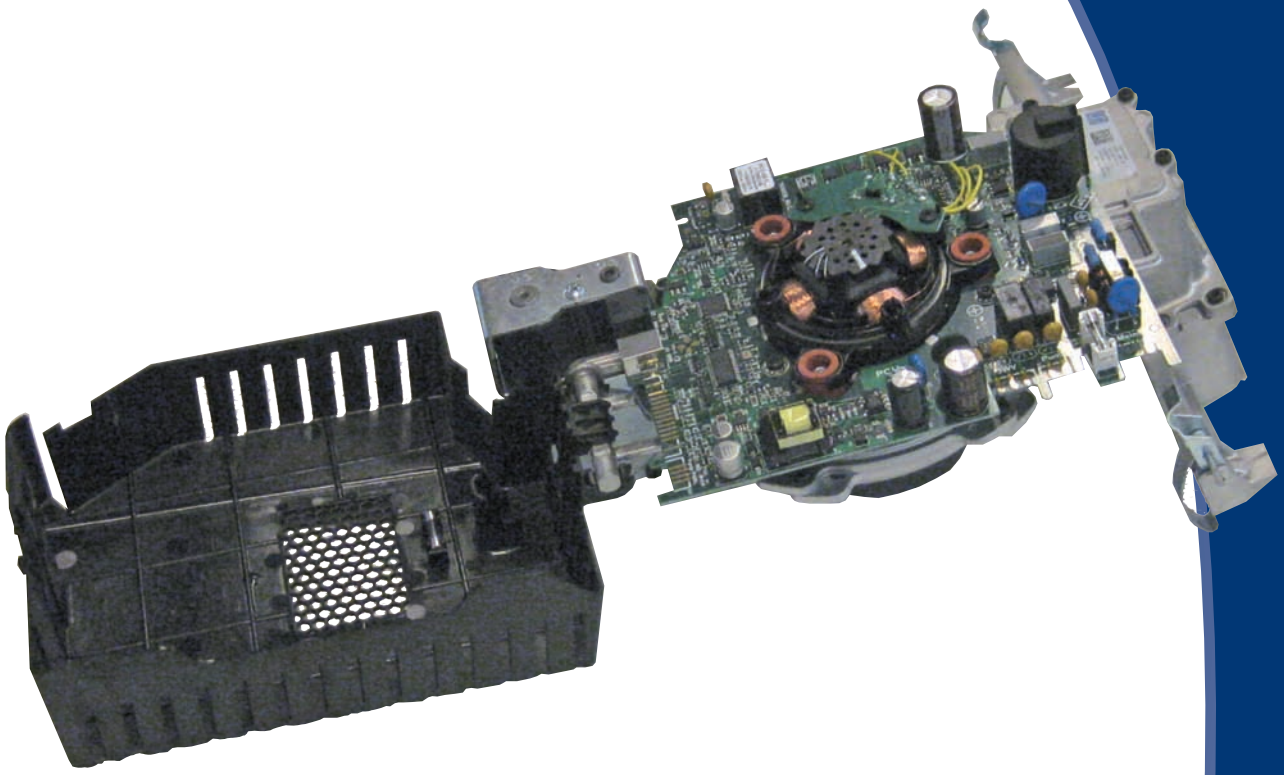
The result is a high performing gas combustion system, with reduction in the overall dimensions and volumes of about 70% and a weight reduction of about 35% when compared to the reference package of equivalent components, thus allowing boiler designers to look for more compact and slim appliances than ever before.

Sonnenblume introduces the “Easy to fit” concept in the assembly line of the boiler manufacturer, reducing purchasing, manufacturing, packaging, handling, transportation and supply chain cost at all levels.

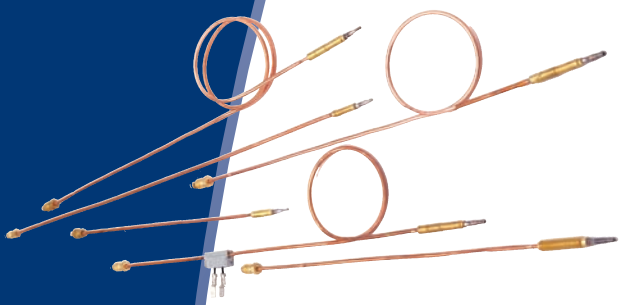
Sonnenblume allows manufacturers to optimize the space inside the boiler in order to design more compact, lighter and easier-to-manufacture appliances.

SONNENBLUME QUADRO

It is a special version of Sonnenblume concept with a different level of product integration. It includes the gas control, the boiler electronics control, the fan and the mixing function up to the burner interface.



SENSORS

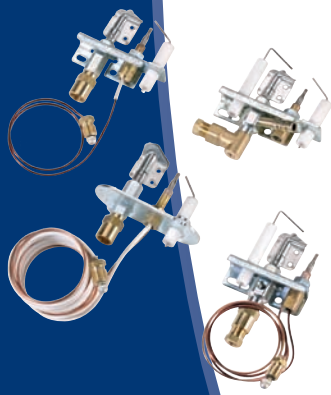


THERMOCOUPLES

Available in standard version for domestic hobs (fast or ultra quick ignition time) and for high-capacity appliances (where a fast cooling time is required).
All the models are also available for the connection of a safety overheat thermostat (interrupted thermocouples) and with aluminized tip to protect against soot. Wide range of lengths and sleeves suits almost every pilot burner.

PILOT BURNERS

Versions available in standard or low energy consumption models, aerated or target, with or without electrode. One, two or three flames versions, suitable to equip all gas appliances. Wide range of fixing brackets are available.

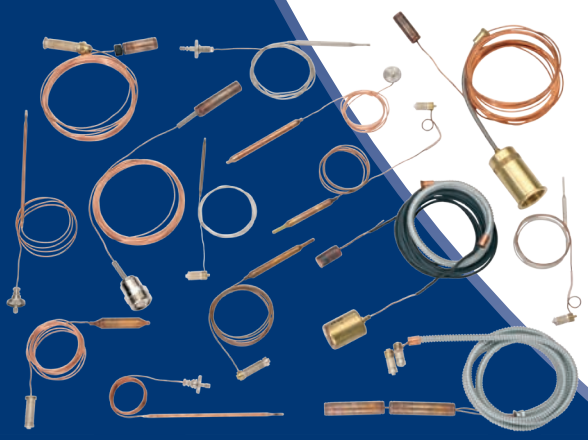


OXYPROTECTOR

Oxygen Depletion Sensor (ODS) with single flame mainly for unvented appliances, equipped with catalytic or infrared burners, or also suitable for blue flame burners.
All components are integrated to guarantee high performance and for quick and easy assembly on to the gas appliance.
Versions for natural or LP gases or multigas with specific or interchangeable injector are available.

OXYPILOT

Oxygen Depletion Sensor (ODS) with two flames for an easier ignition of main burner. Used mainly on horizontal burners: decorative gas fires, instantaneous water heaters and boilers.
Versions for natural or LP gases or multigas with specific or interchangeable injector are available.



SENSING ELEMENTS

Thermo mechanical devices used for sensing temperature in safety shut off systems or in temperature control devices (thermostats).

Two versions available:

- 1000 Series: membrane sensing element for displacements shorter than 1.3 mm;
- 2000 Series: bellow-sensing element for displacements longer than 1 mm.

ACCESSORIES

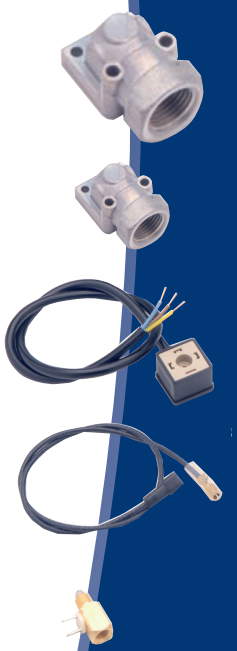
IGNITERS

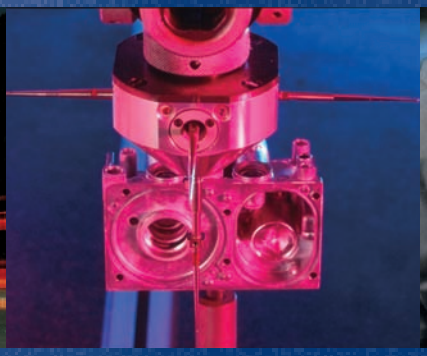
A wide range of electronic igniters for any type of gas appliance are available: configurations with edge or remote push button, versions with battery supply or external power supply, possibility to connect 1, 2, 4 or 6 separate spark electrodes.

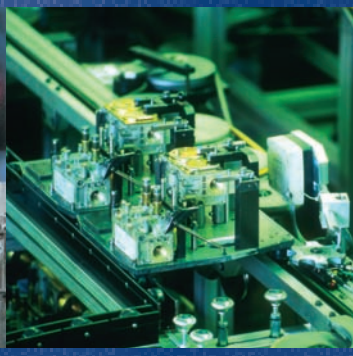
Many versions of piezoelectric igniter are also available to be mounted on panel or on valve edge.

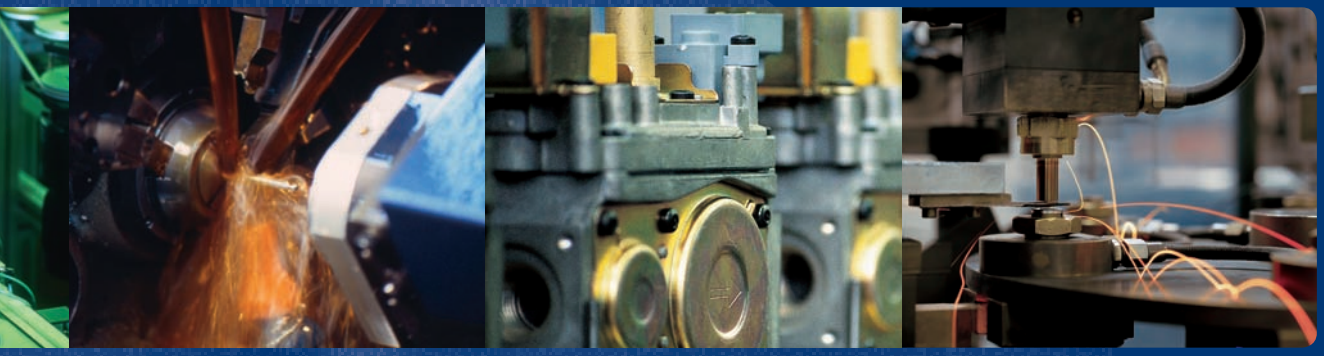
FITTINGS AND WIRING EQUIPMENT

There is a vast range of accessories such as leads, connectors, pipes, coupling flanges, and many others.




SIT Group






SIT La Precisa S.p.A.
Viale dell'Industria 31-33
35129 PADOVA - ITALY
Tel. +39/049.829.31.11
Fax +39/049.807.00.93
www.sitgroup.it
e-mail: mkt@sitgroup.it

9.955.956 13