

# QUALIFICATION DOCUMENT

Engineering

Industrial Gases



LPG and Natural Gas

Healthcare



The **SIAD Group** is among the main industrial groups in Italy and Europe, and has been active since 1927 in the following sectors: Industrial Gases, Engineering, Healthcare, Industrial Goods and Services.

A company with an international vocation from its outset, **SIAD Macchine Impianti S.p.A.** is a global market leader in designing and manufacturing Compressors, Instrument air packages, Air separation units, and Nitrogen generation package as well as a point of reference in different sectors including Refinery, Petrochemical, Chemical, LNG, Energy, Food, & Beverage etc.

Currently, the company designs, manufactures and installs, throughout the world:

- Reciprocating Compressors for compressing all types of air & process gas;
- Standard Compressors for PET bottle blowing;
- Instrument Air Packages with reciprocating compressors;
- Air Separation Units – cryogenic type - for industrial gases production;
- LNG Liquefaction Plants.

Thanks to the **Global Service Division**, it also provides:

- Maintenance and management assistance services.

Over the years SIAD MI has gradually been flanked by foreign subsidiaries and branch offices: two subsidiaries in China, SIAD Engineering Trading (Shanghai) Co., Ltd. established in 2009, and SIAD Engineering (Hangzhou) Co., Ltd. established in 2012, both dedicated to the Chinese market; plus one branch office in Russia, SIAD Macchine Impianti JSC Moscow Branch office, dedicated to the Russian market.

In 2016 the subsidiary SIAD Macchine Impianti Middle East F.Z.C. was opened: based in the UAE, this company operates as a Certified Service Center and spare parts warehouse for compressors for the whole of the Middle East area.

Finally, in 2018, SIAD MI opened a branch office in Madrid, SIAD Macchine Impianti Sucursal de España, that will take care of the company's interests in Spain.



*Oxygen, Nitrogen and Argon production plant, Italy*



*Boil-Off Gas compressor, China*

# ENGINEERING SECTOR STRUCTURE

## Mother Company

**SIAD S.p.A.**

Via S. Bernardino, 92  
24126 Bergamo, Italy  
http: [www.siad.com](http://www.siad.com)  
e-mail: [siad@siad.eu](mailto:siad@siad.eu)

**SIAD S.p.A**

**SIAD Machine  
Impianti S.p.A - Italy  
100%**

## Headquarters Engineering

**SIAD Macchine Impianti S.p.A.**

Via Canovine, 2/4  
24126 Bergamo, Italy  
http: [www.siadmi.com](http://www.siadmi.com)  
e-mail: [siadmi@siad.eu](mailto:siadmi@siad.eu)

Fully owned

**Tecno Project  
Industriale S.r.l  
Italy  
100%**

Pentatec S.r.l.  
Italy  
100%

Tecno Project Industrial Ltda  
Brazil  
92%

Controlled

**ESA S.p.A  
Italy  
60,01%**

ESA Manufacturing  
Pvt. Ltd - India  
99,9%

Belgian Branch of ESA  
100%

Subsidiaries

**SIAD Engineering  
Trading Shanghai Co.  
Ltd - China 100%**

**SIAD Engineering  
Hangzhou Co.  
Ltd - China 100%**

**SIAD Machine  
Impianti Middle East  
F.Z.C - UAE 85%**

**SIAD Americas LLC  
USA 100%**

Branches

**SIAD Macchine  
Impianti Sucursal  
de España 100%**

**Russian Branch of SIAD  
Macchine Impianti,  
Russia 100%**

# HQ LOCATION

## Bergamo's average distances from:

■ Bologna:	239 km
■ Brescia:	57 km
■ Florence:	323 km
■ Genoa:	194 km
■ Milan:	50 km
■ Rome:	601 km
■ Turin:	163 km
■ Venice:	224 km
■ Verona:	115 km



## Useful information

### Airports:

- **Milan**
  - Linate [www.sea-aeroportimilano.it](http://www.sea-aeroportimilano.it)
  - Malpensa [www.sea-aeroportimilano.it](http://www.sea-aeroportimilano.it)

- **Bergamo**

Orio al Serio [www.sacbo.it](http://www.sacbo.it)

### Railway Station:

- **Bergamo** [www.trenitalia.it](http://www.trenitalia.it)



# ENGINEERING COMPANIES ADDRESSES

## ITALY

### TPI - Tecno Project Industriale S.r.l.

Via E. Fermi, 40  
24035 Curno (Bergamo)  
Phone: +39 035 4551811  
Fax: +39 035 4551895  
e-mail: [tpi@tecnoproject.com](mailto:tpi@tecnoproject.com)

### ESA S.p.A.

Via E. Fermi, 40  
24035 Curno (Bergamo)  
Phone: +39 035 6227411  
Fax: +39 035 6227499  
http: [www.esapyronics.com](http://www.esapyronics.com)  
e-mail: [esa@esacombustion.it](mailto:esa@esacombustion.it)

### PENTATEC S.r.l.

Via Aldo Moro, 7  
24035 Curno (Bergamo)  
Phone: +39 035 461673  
Fax: +39 035 6222647  
http: [www.pentatecsrl.com](http://www.pentatecsrl.com)  
e-mail: [commerciale@pentatecsrl.com](mailto:commerciale@pentatecsrl.com)

## BELGIUM

### ESA SpA Belgium branch office

Zoning Industriel, 4eme Rue  
B-6040 Jumet, Belgium  
Phone: +32 (0)71 256970  
Fax: +32 (0)71 256979  
http: [www.2lmg.com](http://www.2lmg.com)  
E-mail: [marketing@pyronics.be](mailto:marketing@pyronics.be)

## USA

### SIAD AMERICAS LLC. Engineered Equipment

Research Forest Dr Ste 180  
4747 The Woodlands  
Phone/Fax: +1 346 380 1268  
http: [www.siadmi.com/united-states-of-america](http://www.siadmi.com/united-states-of-america)  
e-mail: [siadmi@siad.eu](mailto:siadmi@siad.eu)

## BRAZIL

### TPI Tecno Project Industrial Ltda

Rua País de Gales, 161 - Dist. Ind. Bandeirantes  
Salto, SP - CEP 13.326-195  
Phone /Fax: +55 11 40215654  
http: [www.tecnoproject.com.br](http://www.tecnoproject.com.br)  
e-mail: [tpi@tecnoproject.com.br](mailto:tpi@tecnoproject.com.br)

## CHINA

### SIAD ENGINEERING TRADING (Shanghai) Co., Ltd.

Rm 412, no. 5 Building, No. 999, Ningqiao Rd Jinqiao Epz,  
Pudong district, Shanghai City 201206, China  
Phone: +86 21 50550066  
Fax: +86 21 50318959  
http: [www.siadmi.cn/sh](http://www.siadmi.cn/sh)  
e-mail: [siad\\_cn@siad.eu](mailto:siad_cn@siad.eu)

### SIAD Engineering (Hangzhou) Co., Ltd.

17/F, Yizhan Business Bld., No.1 Wenyi West Rd.,  
Xihu District, Hangzhou, 310012, Zhejiang Province, China  
Phone: +86 571 85880480  
Fax: +86 571 85880490  
http: [www.siadmi.cn/hz](http://www.siadmi.cn/hz)  
e-mail: [siad\\_cn@siad.eu](mailto:siad_cn@siad.eu)

## INDIA

### ESA Manufacturing Pvt. Ltd.

Plot No. J - 244, MIDC, Bhosari  
IN-411 026 Pune  
Phone: +91 9822601452  
http: [www.esapyronics.com](http://www.esapyronics.com)  
e-mail: [esaiindia@esapyronics.com](mailto:esaiindia@esapyronics.com)

## RUSSIA

### SIAD Macchine Impianti JSC – Moscow branch

Bolshaya Dimitrovka street 12/1-b.1 3rd floor  
RU-107031 Moscow, Russia  
Phone/Fax: +7 495 7213026  
http: [www.siadmi.ru](http://www.siadmi.ru)  
e-mail: [siad@siad.ru](mailto:siad@siad.ru)

## SPAIN

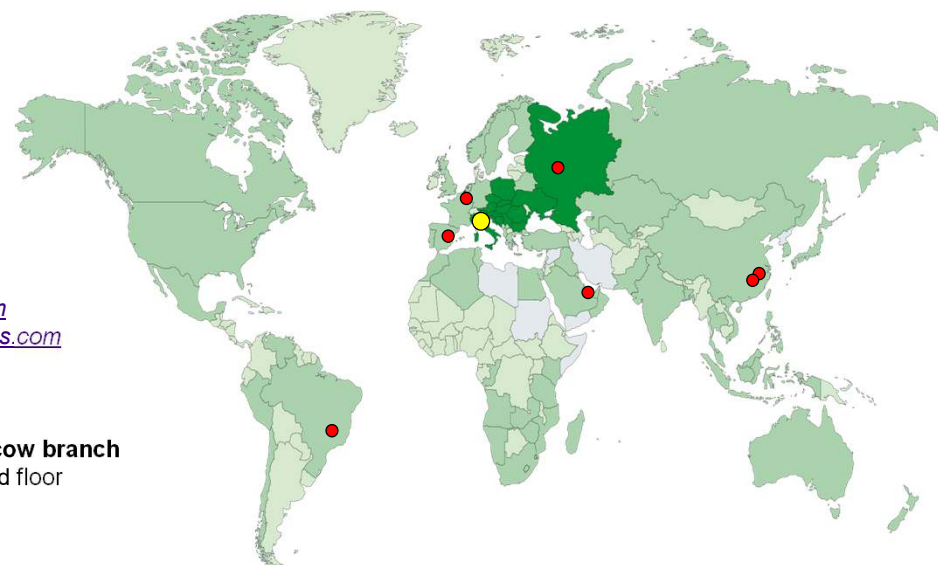
### SIAD Macchine Impianti Sucursal de España

P.I. El Cascajal, Calle Urogallos 1-3  
ES-28320 Pinto, Madrid  
Phone: +34 673 789513  
e-mail: [siadmi\\_es@siad.eu](mailto:siadmi_es@siad.eu)

## UNITED ARAB EMIRATES

### SIAD Macchine Impianti Middle East F.Z.C.

Warehouse H1-03, Gate 1 - P.O.Box 1248  
Ajman Free Zone - UAE  
Phone/Fax: +971 (0)6 7427339  
e-mail: [siadmi\\_me@siad.eu](mailto:siadmi_me@siad.eu)



# COMMERCIAL AND FINANCIAL FEATURES

## Company established in

1953

## Business name

SIAD Macchine Impianti S.p.A.

## Registered office and legal address

Via Canovine, 2/4  
24126 Bergamo, Italy

## Legal status of the company

Stock company

## Chamber of commerce registration

Bergamo, no. 72619, on October 28<sup>th</sup> 1953

## Registration at the court of

Bergamo, no. 3521, on August 27<sup>th</sup> 1953

## V.A.T. and fiscal number

IT 00228420162

## DUNS number

428653836

## Commercial activity code (ATECO)

28.29.20 Construction of machines for Chemical, Petrochemical & Refinery Industries (including parts and accessories)

## Share capital

25.000.000 Euro

## Paid up

25.000.000 Euro

## Capital and retained earnings

112.098.682 Euro

## Partner banks

### INTESA SAN PAOLO

Piazza Matteotti, 29  
24122 Bergamo, Italy  
Phone: + 39 035 3884555 / fax: + 39 035 222854

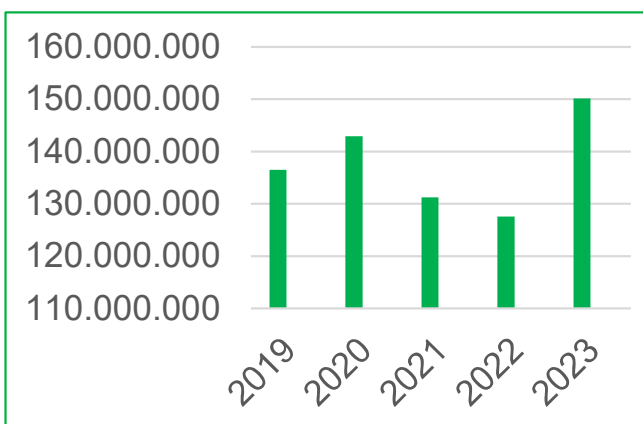
### UNICREDIT

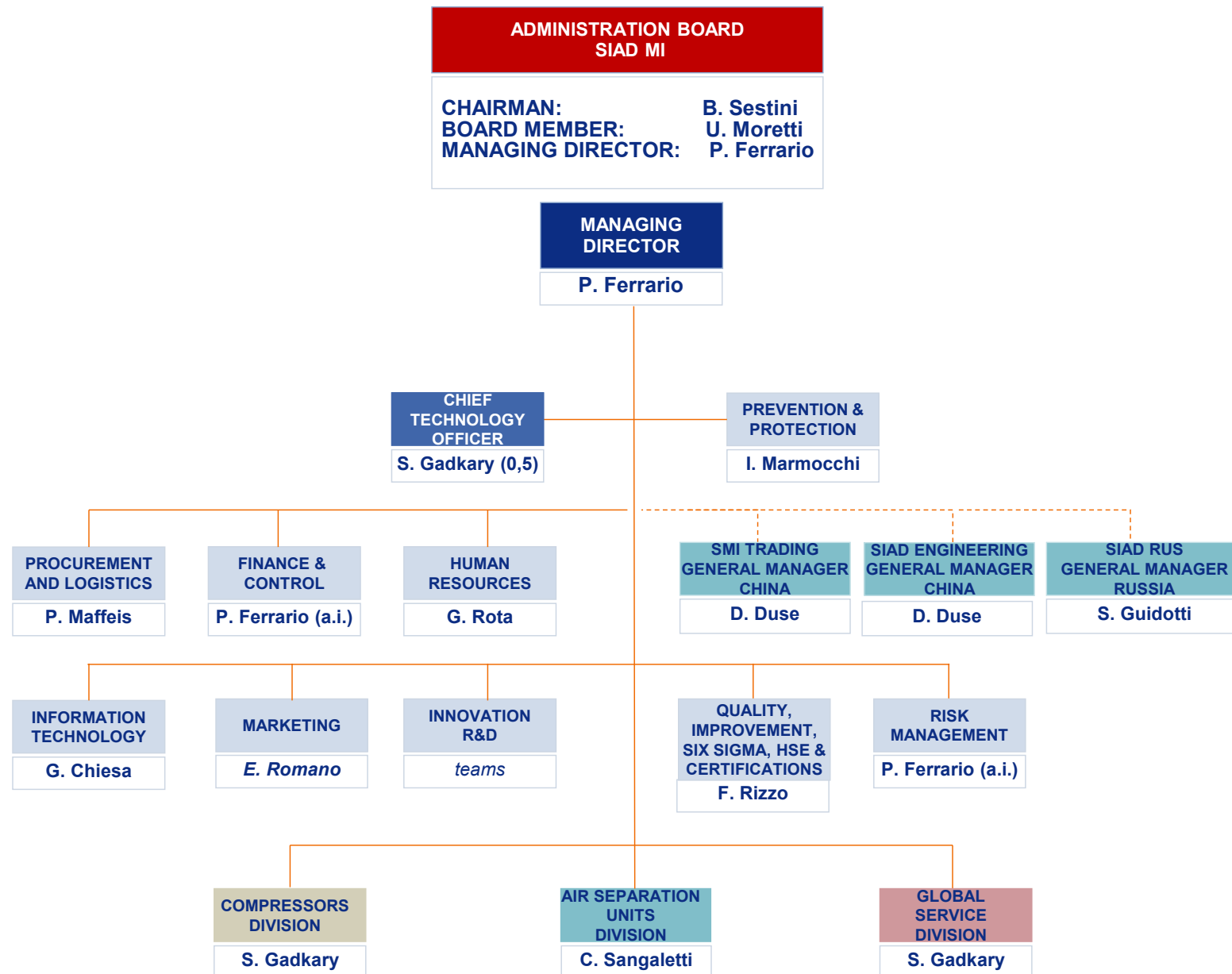
Piazza Vittorio Veneto, 12  
24121 Bergamo, Italy  
Phone: + 39 035 3881111 / fax: + 39 035 3881275

## Standard payment

advance payment and/or step payment,  
all payment supported by letter of credit confirmed by  
primary EEC bank payable  
at sight at delivery.

Year	Turnover (non-consolidated)	
2019	136.500.000	Euro
2020	142.890.000	Euro
2021	131.209.000	Euro
2022	127.580.000	Euro
2023	150.122.000	Euro





# PERSONNEL CHART

## Headcount (HQ Bergamo, Italy)

Marketing	6
Proposal & Sales	33
Engineering	74
Research & Development	3
Project Management	25
Purchasing & Logistics	33
Workshop	15
Start-up	3
After Sales	35
Quality	18
Health, Safety, Environmental & Compliance	2
Information Technology	5
General Service	5
Human Resources	5
Financial & Administration	21

<b>Total</b>	<b>283</b>
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## Communication skills

Arabian - French - Portuguese - Chinese - German -  
Spanish - English - Italian - Japanese

## Training in 2020

- 14 hours/employee  
(learning progress)



# PRODUCTS: RECIPROCATING COMPRESSORS FOR PROCESS GASES AND AIR

## Compressors

Reciprocating compressors for process gases and air (including API 618 and ISO 13631). As equivalent sentence it is also possible Reciprocating compressors for process gas and air (including API618 and ISO 13631).

■ Compression Stages	1/2/3/4/5/6
■ max. suction volume	90.000 m <sup>3</sup> /h (53000 SCMF)
■ max. power	8.700 Kw (11 700 HP)
■ max. delivery pressure	600 bar (a) (8 700 psi a)
■ cylinder arrangement	horizontal, vertical, V, W
■ Crankshaft speed	from 300 up to 1500 rpm

## Compressor package characteristics

Reciprocating piston types, oil free or lube, water air cooled, single or double acting cylinders, complete with electric motor/gas engine/turbine, air or water cooled heat exchangers, instrumentation, electric panel, dryers, receiver, filters and metallic baseplate.

## Specialities

Comburent:	Nitrous Oxide, Oxygen
Corrosive:	Carbon Dioxide, Hydrogen Sulfide, Chlorine, Ammonia,
Explosive:	Acetylene, Butane, Ethane, Ethylene, Hydrogen, Methane, Propylene, Hydrocarbons
Inert:	Air, Argon, Freon, Helium, Nitrogen
Toxic:	Ammonia, Carbon Monoxide



Composed of:

- Reciprocating oil-free air compressors
- Wet air receiver
- Air dryer
- Dry air receiver



# PRODUCTS: OIL-FREE RECIPROCATING COMPRESSORS FOR PET AND PLA BOTTLE BLOWING

## Compressors

Reciprocating high pressure air compressors for PET/PLA bottles (TEMPO<sup>2</sup> and VITO Next series)

- |                          |                        |
|--------------------------|------------------------|
| ■ Compression Stages     | 2/3                    |
| ■ max. suction volume    | 5760 m <sup>3</sup> /h |
| ■ max. installed power   | 945 kW                 |
| ■ max. delivery pressure | 42 bar (a)             |
| ■ cylinder arrangement   | vertical, V, W         |

## Compressor package characteristics

Piston compressors; V or W cylinder configuration; totally oil-free; water-cooled.

## Our trump cards

- Studies to optimize the blowing line for significant power savings;
- Worry-free aftersales service. Furthermore, thanks to our Global Service contracts, we grant total protection from unscheduled expenses.





# PRODUCTS: AIR SEPARATION UNITS

Air Separation Units using cryogenic trays and/or packing technology for the production of industrial gases in liquid and gaseous form.

## Oxygen Nitrogen Argon ASU

- Capacity: Oxygen from 500 Nm<sup>3</sup>/h to 90 000 Nm<sup>3</sup>/h (17 – 3 080 TPD)  
Nitrogen from 1 500 Nm<sup>3</sup>/h to 270 000 Nm<sup>3</sup>/h (45 – 8 100 TPD)  
Argon recovery 92%
- Purity: Oxygen 99.95% and beyond  
Nitrogen < 1 ppm O<sub>2</sub>  
Argon < 1 ppm O<sub>2</sub>

## Oxygen Nitrogen ASU

- Capacity: Oxygen from 500 Nm<sup>3</sup>/h to 90 000 Nm<sup>3</sup>/h (17 – 3 080 TPD)  
Nitrogen from 1 500 Nm<sup>3</sup>/h to 270 000 Nm<sup>3</sup>/h (45 – 8 100 TPD)
- Purity: Oxygen 99.9% and beyond  
Nitrogen < 1 ppm O<sub>2</sub>

## Nitrogen ASU

- Capacity: Nitrogen from 250 Nm<sup>3</sup>/h to 50 000 Nm<sup>3</sup>/h (8.5 – 1 500 TPD)
- Purity: Nitrogen < 1 ppm O<sub>2</sub>

## OxySTEEL OxyCEMENT OxyPAPER

- Capacity: Oxygen from 800 Nm<sup>3</sup>/h to 16 000 Nm<sup>3</sup>/h (27 - 540 TPD)  
Nitrogen can be supplied on request
- Purity: 95% for gaseous O<sub>2</sub>  
99.5% for liquid O<sub>2</sub>  
99.9% for gaseous N<sub>2</sub>



# PRODUCTS: LIQUID OXYGEN & LIQUID NITROGEN PLANTS

Air Separation Units using cryogenic trays and packing technology for the production of Oxygen and Nitrogen in liquid form.

## Smart Liquid Plants (SL 2.0) for Liquid Nitrogen and Liquid Oxygen production - data table

Model		SL 30		SL 50		SL 90		SL 130		SL 190	
Running mode	unit	LOX	LIN	LOX	LIN	LOX	LIN	LOX	LIN	LOX	LIN
DESIGN mode	Nm <sup>3</sup> /h	330	600	600	1000	1015	1600	1563	2315	2510	3015
	STPD	12	20	23	33	38	53	59	77	95	100
MAX LIN mode	Nm <sup>3</sup> /h	285	685	390	1245	940	1685	1400	2510	1550	4130
	STPD	11	23	15	41	36	56	53	83	59	136
MAX LOX mode	Nm <sup>3</sup> /h	345	170	615	360	1205	425	1860	220	2890	0
	STPD	13	6	23	12	46	14	70	7	109	0
MIN LOX mode	Nm <sup>3</sup> /h	10	590	28	1080	290	1505	45	2270	50	3448
	STPD	0.4	20	1	36	11	50	2	75	2	114

Purity: 99.6% for liquid O<sub>2</sub>  
99.999% and more for liquid N<sub>2</sub>





# PRODUCTS: LNG LIQUEFACTION PLANTS



SMART LNG plant type	Nm <sup>3</sup> /h	TPD	Kg/h
<b>SMART LIN-LNG</b> Liquefaction frigorities from Liquid Nitrogen (LIN)	50 ÷ 280	1 ÷ 5	40 ÷ 208
<b>SMART DCE-LNG</b> Direct compression, cooling, expansion and liquefaction of methane	280 ÷ 560	5 ÷ 10	210 ÷ 415
<b>SMART TB-LNG</b> Plants with nitrogen closed loop including expansion turbine and booster	560 ÷ 33 600	10 ÷ 600	415 ÷ 25 000

To reduce operating costs and to maintain the high efficiency of its products, SIAD Macchine Impianti offers its customers a complete range of services, together with a network of Certified Service Centres in five continents, operated by skilled technicians.

## Location of activities and co-ordination

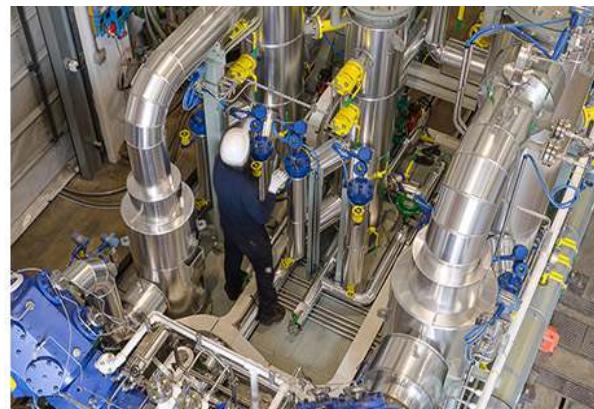
- Headquarters: Italy
- Branches: China, UAE, Brazil
- Certified Service Centres:

Algeria, Argentina, Australia, Bangladesh, Belarus, Bulgaria, Czech Republic, France, Hungary, Italy, India, Kazakhstan, Malaysia, Morocco, Mexico, Oman, Poland, Romania, Russia, Serbia, South Africa, Tunisia, Taiwan, Uzbekistan, Venezuela, Vietnam



## Time required to return a Standard Quotation

1 day.



## Time required for standard Spare Parts Delivery Ex-work

- About 30 days (for normal delivery).
- About 1 day (for urgent delivery).

## INTEGRATED SOLUTIONS



### ON SITE AND REMOTE SERVICES

- Commissioning and Start-up
- Maintenance and Supervision
- Extraordinary repairs in the event of an emergency or faults
- Use of smart glasses for resolving any anomalies



### OEM GENUINE SPARE PARTS: OUR STRENGTH AND PROVEN REPUTATION

- Over 15 000 Spare Parts Items in Stock
- Specific oil for SIAD MI compressors



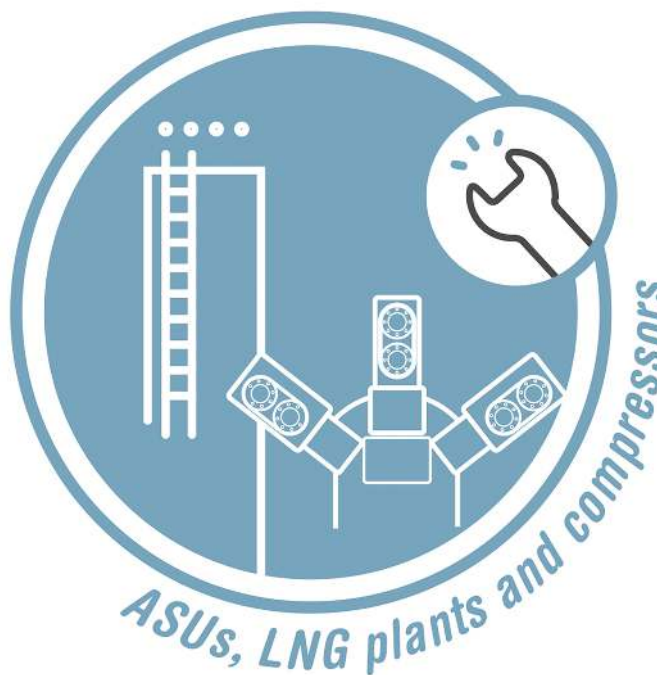
### ON-GOING ENGINEERING

- Latest generation Spare Parts for the lowest lifecycle cost
- Compressor Refurbish, Re-rate, Upgrade and Revamping. Complete overhaul of the compressor "As NEW"
- Energy saving diagnosis and implementation of specific solutions



### GLOBAL ASSISTANCE 24/7

- 24/7 Proactive Help desk from any place in the world at anytime
- CALL +39 02 91947767**



### SIADMI4U

- Remote monitoring and diagnostics system that enables you to manage and analyze in real-time operating parameters of the compressor or plant via PC or Mobile App



### TRAINING COURSES

- At the HQ in our Training Center, or at the End Users' site and online (webinars)
- We supply customized documentation
- Professional training teachers



### TOTAL CARE CONTRACTS (tailor-made)

- Including on site and remotely plus ongoing engineering services in addition to mechanical analysis and predictive maintenance activities

# ENGINEERING CAPABILITIES (1/2)

## Location of activities:

Headquarters - Italy and Hangzhou, P.R.China

## Activities:

Calculation

Design

Acoustical and pulsation analysis

Torsional analysis

Development

Field activities co-ordination

Research

## Sub-Contracted Engineering Activities:

Pipeline detail drafting

Acoustical and pulsation analysis

Calculation

## Equipment that can be designed and guaranteed if performance data are provided:

Gas & air compressor packages

Cryogenic air separation plants

Cryogenic vessels

Automation

LNG liquefiers

## Engineering capability:

- 75.000 hours/year

## Engineering software for process calculation:

- Hysys
- Household software
- Unisym (process calculation)
- EDR (heat exchanger design)
- Ansys (static elasto -plastic Fem analysis)

## Engineering software for design:

- Eagle E-PDS (piping 3D)
- CADMATIC (3D drawing )
- Parametric PRO/E (Wildfire 3.0) and PRO/MECHANICA (ver. 3.0)
- Autodesk AUTOCAD (2010)
- Various software for pressure vessel design
- Solidworks simulation premium
- ARLA ITI-SIM software for torsional analysis
- EPLAN - Elettric CAD
- ESA IN and Aucotec® (for P&ID)
- UNISYM (for process calculation and heat exchanger design)
- Various excel and Graphical Analysis™ GW files for different calculations
- Smiprocom, Smiprohor & ALTERNATIVO for compressor selection and simulation
- SMIPLATE (homemade sw) for compressor baseplate design (based on MatLab®)
- Management SW: BaaN IV C4
- Workmanager (technical documents management)
- Caesar II by Intergraph (FEM for piping)
- Sant'Ambrogio (pressure vessel and heat exchanger calculation)
- Mathcad by PTC (for technical calculation sheets)
- Co-Create modeling 3D
- Co-Create drafting 2D
- KBS (technical documents management)
- SML Drawing (pneumatic diagram drawing)
- STEP7 (Siemens PLC programming)

# ENGINEERING CAPABILITIES (2/2)

**Engineering software for analysis of pulsation, vibration, acoustic and mechanical system response API 618:**  
ACUSYS, ACUSCOMP, DAMPERSIM, VALVESIM

**Pressure Vessel engineering and Construction Codes:**

AD 2000  
ASME VIII DIV. 1 / ASME B 31.3  
BS 5500  
CODAP  
ISPESL  
TEMA  
EN 13445  
EN 13458  
GB

**License:**

CR TU standard package (Russia)  
CR TU process package (Russia)

**Code stamp (in-house):**

CE mark  
U-stamp

**Code stamp (sub-contracted):**  
SELO

**European Directives:**

CE-PED	CE- Low Voltage
CE-Machinery	CE-Electromagnetic compatibility
CE-ATEX	explosion proof

**Engineering Standards:**

ANSI  
API  
ASME  
ASTM  
AWS  
BS  
CEI  
DIN  
EN  
IEC  
ISO / ISA  
NACE  
NEMA  
UNI



# MANUFACTURING CAPABILITIES (1/3)

## Location of Activities

Headquarters and Production Plant of Bariano, Bergamo  
(branches excluded)

## Equipment that can be manufactured and guaranteed if performance data are provided

- Gas and air compressor packages
- Cryogenic air separation plants
- Automation Systems

## Logistics infrastructure

Motorway A4: 1 km

### Airports:

- Linate Milan 50 km
- Malpensa Milan 80 km
- Orio al Serio Bergamo 2 km

### Seaports:

- Genoa 150 km
- Venice 220 km

### Railway Station:

- Bergamo 1 km



## Site area

■ Total area	38.465	m <sup>2</sup>
■ Workshop	16.350	m <sup>2</sup>
■ Offices	5.645	m <sup>2</sup>
■ Yard	n.a.	m <sup>2</sup>
■ Laboratory	128	m <sup>2</sup>
■ Covered storehouse	1.371	m <sup>2</sup>
■ Open storehouse	8.300	m <sup>2</sup>
■ Sea quay	n.a.	m <sup>2</sup>

## Workshop maximum dimensions

■ Length	80 m
■ Width	30 m
■ High	10 m

## Maximum practicable dimensions

■ Length	60 m
■ Width	6 m
■ High	4 m
■ Diameter	4 m
■ Weight	90 tons

## Company fabricating experience

■ Compressors	Since 1927
■ Air Separation Units	Since 1946
■ Automation Systems	Since 1962

## Production workload

Product	Acquired	Annual Capacity
Compressors	80%	300 units
Air Separation Units	80%	15 units

# MANUFACTURING CAPABILITIES (2/3)

## Average delivery time

■ Standard compressor	30 days
■ API 618 compressor	210 days
■ Standard cryogenic plant	280 days
■ Engineered cryogenic plant	350 days
■ Engineered solution	280-300 days

## Production capability

■ SIAD Macchine Impianti	hours/year 230.000
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## Company Facilities

	in house	Subcontract works
■ Cutting	■	■
■ Forming	□	■
■ Heat treatment	□	■
■ Machining	□	■
■ O <sub>2</sub> cleaning	■	□
■ Painting	■	■
■ Plate rolling mills	■	■
■ Sandblasting	□	■
■ Shot/grit blasting	□	■
■ Welding	■	■

## Main sub-contracted equipment

■ casting	Italy
■ centrifugal compr.	USA/Germany
■ control panels	Italy
■ control valves	EU
■ electric motors	EU
■ heat exchangers	EU
■ instruments	Italy
■ prepurifiers	Italy
■ screw compr.	EU/USA
■ vessels	EU
■ heaters	Italy
■ structural steel	Italy

## Types of materials used for fabrication and qualifications:

Material	Specification	Qualified Welders
■ Carbon Steel	low alloy	3
■ Stainless Steel	Gr. 304Gr. 316	3
■ Aluminium Alloy	5083	3

## Welding processes

- Gas tungsten arc welding (GTAW)
- Shielded metal arc welding (SMAW)
- Submerged arc welding (SAW)
- Flux cored arc welding (FCAW)

## Welding procedure qualification according to Code/Standards

- ASME-IX
- EN

## Min. and max. thickness welded

- Carbon steel 1,5-25 mm
- Stainless steel 1,5-34 mm
- Aluminium 3,0-19 mm

## Min. and max. rolled plate

- Carbon steel 1-25 mm
- Stainless steel 1-25 mm
- Aluminium 4-30 mm

## Location of activities

Headquarters

## Activities

- Manage the quality system and the quality assurance system
- Improve the quality system and products
- Apply lean Six Sigma methodology
- Evaluation and qualification of the suppliers.
- Inspect supplies and products.
- Manage the Vendor Rating.
- Manage the personnel training and the quality culture in the company.
- Manage non-compliance cases.
- Calibrate instruments.
- Improve the process performances.
- Carry out audit and manage corrective/ preventive actions.
- Issue of Quality Plan.
- Taking care of customer satisfaction.
- Measure and monitor the process activities through the KPI.
- Manage the Quality Costs and Reduce non-Quality Costs.

## Quality Manager reports to

Managing Director.

## The quality Management system

Was introduced in the company in 1992 and since 1994 was certificated ISO 9001 by DNV – GL.

## Quality management software

INFOR LN®

## Environmental Certificate

ISO 14001 by DNV - GL

## Safety Management Certificate

ISO 45001 by DNV - GL

## Authority Agencies used to Perform Code Inspections

- BV - Milano, Italy
- DNV-GL - Milano, Italy
- SGS - Milano, Italy
- TÜV - Milano, Italy
- Applus Velosi - Bergamo, Italy
- Q.T.S. - Bergamo, Italy
- Phoenix Qc. Co., Ltd - Bangkok, Thailand
- - Lugano, Switzerland

## Inspection & Expediting Agencies

Type of inspection	in house	Subcontract Works
■ Radiographic x rays.	■	■
■ Radiographic γ rays.	□	■
■ Ultrasonic	□	■
■ Magnetic particle	□	■
■ Dye penetrant	■	■
■ Noise	■	■
■ Hardness test	■	■
■ Chemical test/PMI	■	■
■ Mechanical test	□	■
■ Hydrostatic test	■	■
■ Pneumatic test	■	■
■ Leak Test	■	■
■ Running test	■	□
■ Performance test	■	□
■ Vacuum test	■	■
■ Visual & dimensional	■	■
■ Instrument calibration	■	■
■ Vibrating analysis	■	□
■ Painting check	■	■



The qualifications and references obtained over the years are concrete evidence of the constant efforts that SIAD Macchine Impianti makes to improve the quality and guarantee the safeguarding of the environment.

The results of these efforts are technical precision, commercial transparency of the products and services offered and the reaching of ever-more ambitious goals, with a concrete presence recognised all over the world.

## SIAD Macchine Impianti certifications

- Company Quality System: UNI EN ISO 9001:2015
- ISO 14001:2015 Certification
- Occupational Health and Safety Assessment Series certification ISO 45001: 2018
- EAC – Eurasian Conformity Declaration (Russia, Bielorrussia, Kazakistan, Armenia, Kirghizistan):
  - Certificate TR-CU 012 installation in hazardous area for vertical bare compressors
  - Certificate TR-CU 012 installation in hazardous area for horizontal bare compressors
  - Declaration TR-CU 004;010;020; installation in safe area for vertical bare compressors
  - Declaration TR-CU 004;010;020 installation in safe area for horizontal bare compressors
  - Declaration TR-CU 032 for pipe on pipe heat exchanger (for category 1 and 2)
  - Certificate TR-CU 032 for pipe on pipe heat exchanger (for category 3 and 4 )
  - Declaration TR-CU 032 for piping (for category 1 and 2)
  - Certificate TR-CU 032 for piping (for category 3 and 4)
  - Declaration TR-CU 032 for pressure vessels (for category 1 and 2)
  - Certificate TR-CU 032 for pressure vessels (for category 3 and 4)
- Pressure Equipment PED Module H
- Pressure Equipment PED Module H1
- Asme U Stamp certificate
- National Board R Stamp certificate
- National Board Registration certificate

## SIAD Macchine Impianti is also registered at the following portals:

- Achilles: Repro
- SupplHi
- Ecovadis
- Go-Supply
- Others...

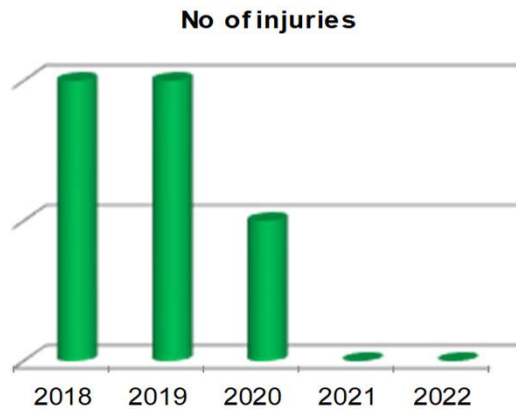
## Safety rules

European Community

Italian DD.Lgs 81/2008

## Monitoring injuries in the last five years

	2018	2019	2020	2021	2022
No of injuries	2	2	1	0	0



## Training and instructions courses for employees

- Safety Training : Lessons for all employees
- Specific Training:
  - Operators to the VDT
  - Noise
  - Vibration
  - Chemicals
  - Manual handling
  - Artificial optical radiation
  - Emergency
  - Lifting devices driver
  - Fire prevention and fire evacuation test
  - Lifting devices driver

## Security plans for the major operations

- Supplies of specific DPI.
- Commercial artistry.

## Fields

- Plant operational safety.
- Machinery operational safety.
- Environmental control.

## Emergency

- Evacuation and simulation test for emergency scenarios regarding safety & environment



**SIAD** MACCHINE  
IMPIANTI

*siadmi.com*  
*siadmi@siad.eu*



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