

# Q-BOSS

*Elegant and Intelligent Solutions for the Energy Transition*



## EQUIPMENT & SOLUTIONS PORTFOLIO

COMPRESSORS AND PACKAGES • VALVES • HEAT EXCHANGERS • AFTER SALES SUPPORT

# Q-BOSS

Q-BOSS Energy and Process Solutions is a specialised Australian-based equipment solutions provider formed to source and support our clients in the region and internationally with world-leading innovative, highly reliable, money-saving equipment and process solutions in the energy transition (CCS, green energy, hydrogen), oil and gas, chemical and process, mining, industrial gases, and refrigeration industries.

We are committed to long-term relationships with our clients, and are therefore committed to the utmost care in the quality of our solutions in equipment supply and the supporting process engineering design. We pride ourselves on offering reliable and durable products and equipment of the highest global quality and reliability that optimise our clients' Total Cost of Ownership.



## *Elegant & Intelligent Solutions for the Energy Transition*

### S E R V I C E S

- Support from the feasibility design, PMC and FEED stages onwards
  - Technical and commercial firm and budget quotations
  - After sales support, original spare parts, maintenance, training

### V A L U E A D D E D

- Local certified technician
- Quick and prompt feedback
- Reliable products from selected top quality Partners (Italy, Europe)
  - Customised products according to clients specifications
    - ISO 9001:2015 Certified
  - Cost saving customised solutions

### O U R C L I E N T S



### O U R P A R T N E R S

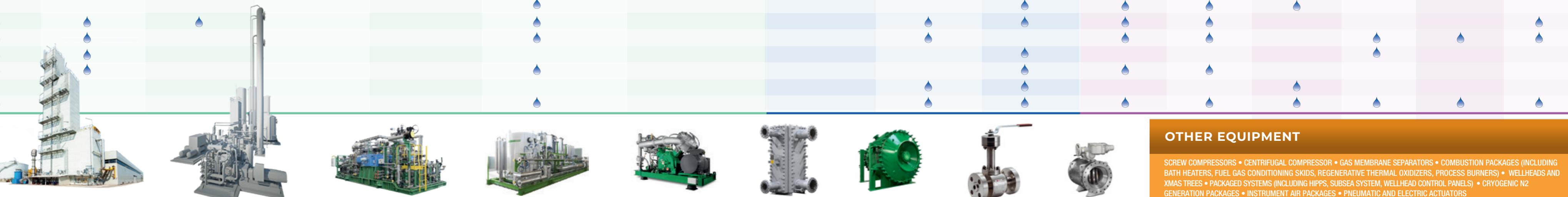


Dedicated product brochures and references are available on request.

## PRODUCTS

## COMPRESSORS AND PACKAGE SOLUTIONS

	COMPRESSORS AND PACKAGE SOLUTIONS						HEAT EXCHANGERS			VALVES										
	AIR SEPARATION UNIT (ASU)	SMALL MODULAR ASU (SMART LIQUID PLANT)	SMALL SCALE LNG (SMART LNG PLANT)	BIOGAS UPGRADING PLANT	CO <sub>2</sub> PLANTS	RECIPROCATING COMPRESSOR	STANDARD AIR COMPRESSOR FOR r-PET and PLA BOTTLE BLOWING	PLATE AND SHELL	SPIRAL	BLOC	METAL SEATED BALL VALVE	SOFT SEATED BALL VALVE	CRYONIC BALL VALVE	GLOBE	CHECK	BUTTERFLY				
MADE IN	Italy China (as option)	Italy China (as option)	Italy China (as option)	Italy	Italy	Italy (China as option)	Italy (China as option)	France	France	France	Italy	Italy	Italy	Italy	Italy					
	Capacity: Oxygen: from 500 Nm <sup>3</sup> /h to 110,000 Nm <sup>3</sup> /h Nitrogen: from 1,500 Nm <sup>3</sup> /h to 330,000 Nm <sup>3</sup> /h Argon: recovery 92% Purity: Oxygen: up to 99.95% Nitrogen: less than 1 ppm (O <sub>2</sub> ) Argon: less than 1 ppm (O <sub>2</sub> ) Gas: Oxygen, Nitrogen, Argon (Liquid or Gas)	Capacity: Oxygen: 330 Nm <sup>3</sup> /h - 2,510 Nm <sup>3</sup> /h Nitrogen: 600 Nm <sup>3</sup> /h - 3,015 Nm <sup>3</sup> /h Oxygen: 99.9% 02 Nitrogen: 99.99% & up to 10 ppm of O <sub>2</sub> Gas/Fluid: Oxygen, Nitrogen (Liquid)	LNG Production: SMART LNG-LNG: up to 280 Nm <sup>3</sup> /h Plant involving the use of liquid nitrogen as the cooling factor. SMART DCE-LNG up to 340 Nm <sup>3</sup> /h Direct compression, cooling, expansion and liquefaction of the methane SMART TB-LNG up to 33,600 Nm <sup>3</sup> /h Nitrogen recycling plant with expansion turbine and booster	Biomethane delivery pressure: from 10 bar to 20 bar Biogas capacity: from 50 Nm <sup>3</sup> /h to 3,000 Nm <sup>3</sup> /h	CO <sub>2</sub> Recovery Plants CO <sub>2</sub> Extraction Plants CO <sub>2</sub> Liquefaction Plants • Captured CO <sub>2</sub> capacities from 4 to 450 TPD • Liquefaction capacities from 4 to 450 TPD and beyond with multiple line of purified CO <sub>2</sub>	Type: lube and oil free Power: from 10 kW to 8.7 MW Compression stages: up to 6 Speed: from 300 up to 1,500 rpm Capacity: up to 90,000 Nm <sup>3</sup> /h Pressure: up to 550 Bar(a) Cylinder arrangement: vertical, horizontal Gas: All gases (O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , Air, CO <sub>2</sub> , CO, N <sub>2</sub> O, H <sub>2</sub> S, Hydrocarbons, Natural Gas)	THE VITO NEXT SERIES Type: oil free, dried high-pressure air in compliance with ISO8573 Area: 2,000 m <sup>2</sup> • Applications: Liquid / Liquid Gas / Liquid Phase Change	Pressure: FV / 150 bar(g) Temperature: -196°C / 500°C Area: 2,000 m <sup>2</sup> • Applications: Liquid / Liquid Gas / Liquid Phase Change	Pressure: FV / 100 bar(g) Temperature: -100°C / 400°C Area: 3,000 m <sup>2</sup> • Applications: Liquid / Liquid Gas / Liquid Phase Change	Pressure: FV / 70 bar(g) Temperature: -100°C to 700°C Area: 2,000 m <sup>2</sup> • Applications: Liquid / Liquid Gas / Liquid Phase Change	Size: 1/2" - 20" Rating: 150 Lb. - 2,500 Lb. / PN16 - PN420 Temperature: -46°C to 200°C Service: dangerous and abrasive services Gas/Fluid: all Construction: 2 ways	Size: 1/4" - 48" Rating: 150 Lb. - 2,500 Lb. / PN16 - PN250 Temperature: -196°C to 425°C Service: cryogenic Gas/Fluid: all Construction: 2 ways	Size: 1/2" - 10" Rating: 150 Lb. - 1,500 Lb. / PN16 - PN100 Temperature: -196°C to 190°C Service: on/off, steam, gases thermal oil Gas/Fluid: all Construction: 2 ways	Size: 1/2" - 8" Rating: 150 Lb. - 600 Lb. / PN16 - PN160 Temperature: -10°C to 200°C Service: pump discharge line Gas/Fluid: water, steam, oil, gases Construction: 2 ways	Size: 1/2" - 24" Rating: 150 Lb. - 900 Lb. / PN16 - PN40 Temperature: -46°C to 200°C Gas/Fluid: all Construction: 2 ways	Size: 1.1/2" - 32" Rating: 150 Lb. - 2,500 Lb. / PN16 - PN40 Temperature: -46°C to 200°C Gas/Fluid: all Construction: 2 ways				
VALUE ADDED	• More than 70 Years experience in ASU • More than 600 ASU's installed on worldwide basis • High degree of automation to maximize efficiency • ASU from small to large up to 3,800 m <sup>3</sup> /pd • Possibility to add Argon and Rare Gases (Xe, Kr, Ne) sections to maximize ASU profitability • Tailor made fabrication according to clients' specifications • Remote monitoring system service	• Maximum operating flexibility High purity High efficiency: energy saving of at least 10% compared to previous solutions • Complete installation in just 15 days • High level skid mounted technology (5 main modules) • Fully automatic system for easy and reliable unattended operation • Compact design for the easiest maintenance • Optimum CAPEX and OPEX compromise for the lowest overall product cost	• Safety: Nitrogen as cooling fluid • Environmental friendly • High performances (more than 99% purity) • Simple plant management process and control system in all stages of operation • 60 years experience in liquefaction • For small LNG distribution network to use as fuel in big engines (ships, train, airplanes) • High efficiency for low operating cost	• High pressure operating system management • High performances (more than 99% purity) • The membrane solution allows a great flexibility • Possibility to modulate the system and decrease the flow rates up to 50% of the nominal value • The system can be adapted to existing lines or supply only some components if the customer already has existing pre-treatments • Reduction of energy cost using <2ppm • Available as PED or ASME VIII design, others on request • 24/7 remote service available • Produce food-grade quality CO <sub>2</sub> • High efficiency for low operating cost	• 40 Years experience in CO <sub>2</sub> management • Complete tailor made solutions available on request • Improved cylinder flow dynamics behaviour • Amine-based solvent absorbing (MEA or patented solution) • Compact liquefaction and stripping technology ensuring O2 content <2ppm • New materials for a longer life • Elimination of critical pollutant components • Safety (proper material selection) • Tailor-made compressors skid mounted or on foundation • API 618, API11P, EIGA, Standard Manufacturer • Easy maintenance thanks to the ergonomic layout	• High performance with the lowest power consumption: • Simplified configuration • Reduced friction • Improved cylinder flow dynamics behaviour • Optimized valve positioning • Simplified piping routing • Eco compatibility • New materials for a longer life • Elimination of critical pollutant components • Safety (proper material selection) • Tailor-made compressors skid mounted or on foundation • API 618, API11P, EIGA, Standard Manufacturer • Extended lifetime	• Greater efficiency • Enhanced sustainability • Simplified configuration • Reduced friction • Improved cylinder flow dynamics behaviour • Optimized valve positioning • Simplified piping routing • Eco compatibility • New materials for a longer life • Elimination of critical pollutant components • Safety (proper material selection) • Tailor-made compressors skid mounted or on foundation • API 618, API11P, EIGA, Standard Manufacturer • Extended lifetime	• Fully welded and strong construction • Enhanced sustainability • Simplified configuration • Reduced friction • Improved cylinder flow dynamics behaviour • Optimized valve positioning • Simplified piping routing • Eco compatibility • New materials for a longer life • Elimination of critical pollutant components • Safety (proper material selection) • Tailor-made compressors skid mounted or on foundation • API 618, API11P, EIGA, Standard Manufacturer • Extended lifetime	• Welded and strong construction • Enhanced sustainability • Simplified configuration • Reduced friction • Improved cylinder flow dynamics behaviour • Optimized valve positioning • Simplified piping routing • Eco compatibility • New materials for a longer life • Elimination of critical pollutant components • Safety (proper material selection) • Tailor-made compressors skid mounted or on foundation • API 618, API11P, EIGA, Standard Manufacturer • Extended lifetime	• Compact size and easy installation • Low maintenance and OPEX costs • Easy maintenance (no gaskets) • Tailor made solutions • Optimised temperature approach • Clean / semi-fouling fluids • Robust design	• Compact size and easy installation • Low maintenance and OPEX costs • Easy access for inspection and cleaning • Fully customizable • Most suited to the highest fouling applications • 100% of the slurry flows in a single heat transfer channel promoting a self-cleaning effect. • In-situ Cleaning • Low gas pressure drops	• Competitive delivery (from 4 to 18 weeks) • Low maintenance and OPEX costs • Main certifications (PED, ATEX, ISO, Fire Safe, SIL, Ta-Luff, CRCC) • Pentafite technology: • Perfect Tightness • No additional machining • Easy maintenance and lower cost • Gas tightness	• Competitive delivery (from 4 to 18 weeks) • Low maintenance and OPEX costs • Main certifications (PED, ATEX, ISO, Fire Safe, SIL, A.B.S) • Pentafite technology: • Perfect Tightness • No additional machining • Easy maintenance and lower cost • Gas tightness	• Competitive delivery (from 8 to 18 weeks) • Flexible in the design of gasket and seat • Main certifications (PED, ATEX, ISO, Fire Safe, SIL, A.B.S) • Pentafite technology: • Perfect Tightness • No additional machining • Easy maintenance and lower cost • Gas tightness	• Competitive delivery (from 8 to 18 weeks) • Flexible in the design of gasket and seat • Main certifications (PED, ATEX, ISO, Fire Safe, SIL, A.B.S) • Pentafite technology: • Perfect Tightness • No additional machining • Easy maintenance and lower cost • Gas tightness	• Competitive delivery (from 2 weeks) • Competitive prices against the main competitors	• Competitive delivery (from 2 weeks) • Competitive prices against the main competitors	• Competitive delivery (from 2 weeks) • Competitive prices against the main competitors	• Competitive delivery (from 2 weeks) • Competitive prices against the main competitors	
INDUSTRIES	CEMENT	CHIMICAL	CIRCULAR ECONOMY	COLD GASES TRANSPORTATION & STORAGE	ENERGY & POWER GENERATION	ENVIRONMENTAL	FOOD & BEVERAGE	GLASS	INDUSTRIAL GASES	LIQUEFIED NATURAL GAS (LNG)	MARINE	METAL PRODUCTION	MINING	OFF-SHORE (FLNG, FPSO, FLNG)	OIL & GAS, EXPLORATION & PRODUCTION	PETROCHEMICAL	PULP AND PAPER	REFINERY	REFRIGERATION	WATER TREATMENT & TRANSMISSION



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www.q-boss.com.au

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## OTHER EQUIPMENT

SCREW COMPRESSORS • CENTRIFUGAL COMPRESSOR • GAS MEMBRANE SEPARATORS • COMBUSTION PACKAGES (INCLUDING BATH HEATERS, FUEL GAS CONDITIONING SKIDS, REGENERATIVE THERMAL OXIDIZERS, PROCESS BURNERS) • WELLHEADS AND XMAS TREES • PACKAGED SYSTEMS (INCLUDING HIPPS, SUBSEA SYSTEM, WELLHEAD CONTROL PANELS) • CRYOGENIC N2 GENERATION PACKAGES • INSTRUMENT AIR PACKAGES • PNEUMATIC AND ELECTRIC ACTUATORS



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