



GROUP OF COMPANIES



HVAC | REFRIGERATION | DUCT CLEANING | INSULATION

[www.spcosg.com](http://www.spcosg.com)

DeFining **HVAC**  
for the **Marine Offshore**  
**Oil & Gas** Industries



SOLUTION FOR MARINE & OFFSHORE AND ONSHORE SERVICES



## COMPANY BACKGROUND

SPCO was formed to meet identified need in the market for a specialist EPCC company to provide a quality “fit for purpose” HVAC&R service to marine and offshore companies at a competitive price.

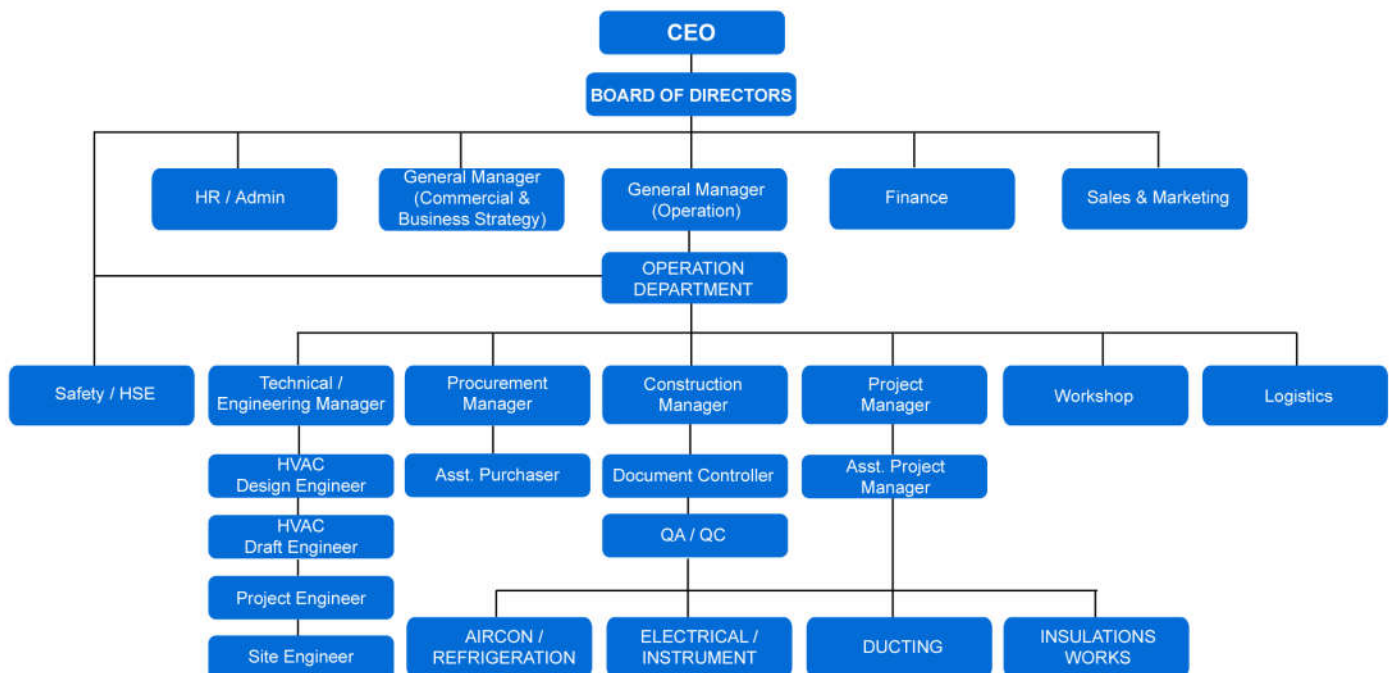
SPCO has now evolved to become one of Asia Pacific’s leading providers of marine and offshore HVAC&R. Refrigeration and Mechanical Ventilationsystem.

The individual business units at SPCO provide full-function R&D, QA, engineering and customer service to meet customer requirements 24/7. Our Workshop operates with full equipped facilities with well maintained Administration, HSE and environmental quality.

## COMPANY STRUCTURE

The company operates with in a fluid structure designed to improve speed of response and adaptability to meet needs of its customers. The operation structure is divided into three interlinked descipline of Ventilation / Ducting, Aircon / Refrigeration and Electrical Departments.

Each department is headed by a competent supervisor and overseen by the operation, Engineering and Technical managers respectively. All the departments are overseen by the board of directors who have extensive experience in the Marine / Offshore Oil & Gas HVAC&R industry.





## **CULTURE AND COMPANY QUALITY POLICY**

SPCO Group has adopted a simple and unique approach to the way it conducts itself in the marketplace. This approach is integral to the company culture and operation quality policy and, as such, will be supported and continually reinforced by the senior management.

Our business quality policy is distinct in that the company is committed to working in a non confrontational way with our clients to achieve the best solutions for the benefit of both parties. Our company will commit itself to developing long term trusting relationships earned by actual performance.

Our company continuously strives to improve productivity by following best industry practices to fulfill contractual and regulatory /statutory requirement and also ensure all projects are delivered on time and within budget to TOTAL CUSTOMER SATISFACTION.

**We are committed to continuously develop our employees  
in their competence and commitment to  
TOTAL QUALITY MANAGEMENT**

**P.Gopal  
CEO**

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## WORKSHOP FACILITY @ TUAS

50,000sqf of land area

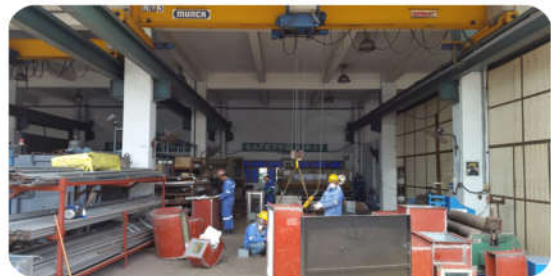
Our workshop facilities ready for fabrication resources are strategically located and fully equipped to meet the growing Marine and Offshore market.



**HYDRAULIC SERVICES WORKSHOP**



**ELECTRICAL WORKSHOP**



**HVAC FABRICATION WORKSHOP**



**MACHINERY WORKSHOP**



**STEEL, PIPING FABRICATION WORKSHOP  
& CHEMICAL CLEANING BAY PLATFORM**



**STORAGE PLACE**



**WAREHOUSE**

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## OUR WORKSHOP AVAILABLE MACHINERY EQUIPMENT'S



**DUCT AUTOFOLD MACHINE**



**HEAT EXCHANGER COOLER  
FIN PRESS MACHINE**



**RADIAL DRILLING  
MACHINE**



**HYDRAULIC PRESSES  
MOTOR**



**VERTICAL MILLING  
MACHINE**



**LATHE MACHINE**



**SYMMETRICAL  
ROLLING MACHINE**



**HYDRAULIC  
PRESS BRAKE MACHINE IS USED  
TO BEND ALL KIND OF PLATES**



**SHEET CUTTING MACHINE  
MANUAL SHEET SHEARING**



**CNC PLASMA  
CUTTING MACHINE**

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## OUR INSULATION WAREHOUSE & EQUIPMENT



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## PROJECT EXPERIENCE IN MARINE & OFFSHORE INDUSTRIES

### HVAC&R ENGINEERING PROCUREMENT CONSTRUCTION CONTRACTOR (EPCC)

Our company specialize in Turnkey HVAC&R design, fabrication and installation for the marine / offshore, Oil and Gas industries for a variety of application like FPSO/FSO conversions, Drill barges, Drill ships, Inland barges, Jackup rig, Offshore platforms, Semi sub and submersible rigs, Electrical house, Topside module and all kinds of oceangoing vessels.

We can design and build to meet project specific requirements or alternatively supply proprietary equipment from all of the major HVAC&R equipment manufactures.

### HVAC&R REPAIR / OVERHAUL / UPGRADING SERVICES

Our services typically include some or all of the following :

- Complete System Installation
- Performance review of existing system and recommend/implement corrective measures
- Overhaul of air conditioning and reefer compressors
- Fabrication and installation of ducting
- Duct and Air conditioning of ducting
- Duct and Air conditioning Insulation works
- Repair renewal and refit of cabin boxes/deffuser
- Indoor air quality measurement
- Air balancing
- Robotic Duct cleaning
- Mechanical Ventilation fan installation
- Fire dampers repair/renewal and maintenance
- Repair/renewal and maintenance of Air Handling Units, Chillers, Condensing units
- Repair/renewal and maintenance of Provision refrigeration system

We take care of your entire HVAC&R system maintenance, repair and conversion requirements regardless of the size from the small repairs to large projects

## ***STAY COOL WITH SPCO GROUP***



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## OUR ENGINEERING SERVICES

### **MARINE HVAC SPECIALIZATION**

- Marine / Offshore HVAC Complete Turnkey Engineering and Design
- Overhauling of Air Conditioner and Reefer's Compressor
- Ducting Fabrication and Ducting Insulation Works
- Cabin Box / Diffuser
- Light Steel Works and Outfitting
- Fabrication and Re-tubing of Shell & Tubes Heat Exchanger
- Mechanical Ventilation Fan Design and Installation
- Dehumidifier System
- Robotic Air Duct Cleaning
- Marine Carpentry & Renovation Works
- Rental of reconditioned Marine Air Conditioner

### **ENGINEERING DRAWING**

- HVAC/R Equipment Dimensional General Arrangement (GA)
- Ducting & Instrument Diagram (D&ID)
- Piping & Instrument Diagram (P&ID)
- Ducting Layout & Duct Supports
- Duct Spool & Penetration Detail Drawings
- Air Stack & Air Plenum Box, Mushroom Ventilators & Exhaust Goosenecks Details
- Ductwork Fabrication & Shop Drawing & Details
- HVAC/R Calculation, Analysis & Equipment Sizing, Duct Sizing
- HVAC/R Equipment Technical Reports, Data Sheet & Specification
  - a. TRP - Technical Requisition Package
  - b. TBE - Technical Bidders Evaluation
- Technical & Engineering Drawings
- PDMS 3D Modeling for HVAC/R Piping

### **ENGINEERING DOCUMENTS PREPARATION**

- MTO Preparation
- Weight Control Report
- Testing & Commissioning Procedure ( complete HVAC System)
- Air Flow Balancing Procedure (Ductwork Line)
- Duct Leak Test Procedure (Ductwork Line)
- HVAC Duct & Equipment's Preservation Procedure
- Ductwork Erection Procedure
- HVAC Equipment's Mechanical Handling Procedure
- Technical Requisition Package (TRP)

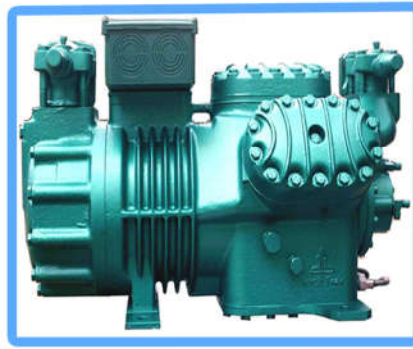
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## WE ARE AUTHORIZED DISTRIBUTER / SERVICE PROVIDER

- . Marine/Offshore Air Conditioning equipment
- . Custom made Air Conditioning equipment, Air handling units, and condenser
- . Sea water cooled package units and self contained units
- . Evaporator cooling and heating coils
- . Vessel cold rooms
- . Chillers ( With Sea Water Condenser)
- . All Major Brands of air conditioning spare parts
- . Spiral Duct and Ducting fitting (single and double skin)
- . Diffuser, Grilles, Cabinunits, Sound Attenuators and Air boxes
- . Fire dampers ( classification approved type) electrical and pneumatic
- . Mechanical ventilation fans
- . Fire retardant, flexible ducting and accesorries (BATAFI AFLEX)
- . Pre-insulated duct panel (Piralu & Hao Hai)
- . Electrical Control panels
- . Dehumidifier system



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## AIR DUCT CLEANING

Entire duct cleaning and vent cleaning process:

Step 1 – Our technicians begin with pre-cleaning inspection and

Step 2 – Next, we use a Super collector-filtered vacuum to systematically clean:

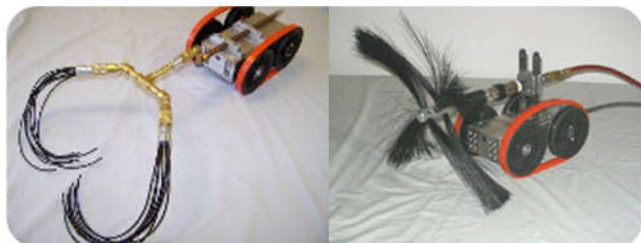
- Furnace
- Evaporator coil
- Blower
- Vent covers

Step 3 – The vacuum is connected to the main trunk line to collect dirt, dust and other contaminants lodged deep within the system.

Step 4 – A variety of agitation tools dislodge the dirt and debris

Step 5 – Then, we blow compressed air through each air duct to ensure that the vacuum removes any dirt loosened during agitation.

Step 6 – On completion of duct cleaning works, the owner officer in-charge shall be invited for a joint inspection. Thereafter, an official report shall be submitted including photo's before and after. Any damages or deficiencies found in the duct system shall be stated in the report for client / owner's follow-up action plan and record.



Robotic Inspection & Cleaning Systems



Powerful Air Brush & Air System  
Duct Cleaning Tools



Portable Vacuum Collector System



Air Ducting Clean Before & After

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## INSULATION SERVICES

**SPCO** formed a group of specialist to cater to the market in need of solutions for piping insulation. Our team possesses excellent knowledge of metal fabrication and installation works in hot, cold thermal insulation as well as metal fabrication works for pipes, pipe fitting, equipment tank, exchanger, vessel, tower etc.

The SPCO experience results in incomparable expertise in the commissioning of insulation solutions.

### **THERMAL INSULATION:**

#### **- Field of Insulation Services**

- Maintenance- Shut down, Annual
- Expansion/ Extension of existing plants
- New built plants/ vessels/ Oil rigs/ plat form / FPSO conversion

#### **- Scope of work**

- Piping and Ducting systems
- Spherical and Storage tanks
- Vessel and equipment
- SBM buoys
- Incinerators, furnaces and boilers
- Stacks and chimneys

#### **- Type of insulation**

- Hot and cold insulation
- Cryogenic insulation
- Sound barrier insulation
- In-situ Polyurethane foam filling
- Pre-fabricated insulation

#### **- Insulation Materials Options**

- Elastomeric Insulation
- Calcium Silicate
- Ceramic Fiber
- Fiberglass
- Foam glass
- Mineral wool
- Phenolic Foam
- Polyisocyanurate (PIR)
- Polyurethane

#### **- Cladding Options (Jacketing)**

- Aluminium
- Stainless Steel
- Galvanized Steel
- Silicone Cloth
- Glass Cloth
- ULVA Shield

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# OUR PHOTO GALLERY



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## LIST OF MAJOR CONTRACTS AWARDED

Picture	Year	Vessel Name	Yard/Owner	Description of Works
	Jan 2018 to Current	AGEAN PARADISE	Excel Procurement & Trading	A. Aircon Unit / Chilled Water Evaporator Coil B. Aircon Unit / VRV System
	Jan 2018 to Current	HULL 1174 HULL 1175	ASL Shipyard	A. Air Conditioning System for Accommodation Areas B. Mechanical Ventilation Fan for Engine Room / Machinery Space. C. Mechanical Ventilation / Mechanical Space Ducting.
	Jan 2018 to Current	FPSO LA NOUMBI	Keppel Shipyard	Duct Cleaning of Accommodation Ducting System.
	Jan 2018 to Current	AMUSEMENT WORLD	Excel Procurement & Trading	A. Chiller Room Rubber Gasket Packing B. Emergency Generator Cooling Water Radiator
	Oct 2017 to Current	FPSO YOMBO	Keppel Shipyard	A. Engineering, Procurement, Construction & Commissioning (EPCC) of HVAC System. B. Duct Cleaning of Galley Exhaust Ducting System. C. Installation of Galley Hood.
	Dec 2016 to Current	MAERSK OIL CULZEAN PROJECT	SMOP	(Fabrication, Installation, Commissioning) Supply, Fabrication and Installation of HVAC Package Ducting for Top Side (CPF & WHP & ULQ)



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## LIST OF MAJOR CONTRACTS AWARDED

Picture	Year	Vessel Name	Yard/Owner	Description of Works
	July 2016 to Feb 2017	BW CATCHER FPSO	Keppel Shipyard	Ducting Installation Work for Upper Deck & Poop Deck
	Nov 2014 to Feb 2017	FPSO GOLAR HILLI	Keppel Shipyard	EPCC ( Engineering, Procurement, Construction & Commissioning ) Renewal of Air Conditioning Suystem in Accommodation including Demolition, Design, Supply, Installation and Commissioning Work
	July-2016 to Dec-2016	TECHNIP YAMAL LNG PROJECT	PT SMOE Indonesia	Supply and Fabrication of HVAC Ducting Stainless Steel External Duct Supply and Fabrication and of HVAC Air Stack for Stainless Steel External Duct
	Oct-2015 to Dec-2016	HUSKY MADURA	Keppel Shipyard	EPCC ( Engineering, Procurement, Construction & Commissioning ) Renewal of Air Conditioning System in Accommodation Design, Supply, Installation and Commissioning Work
	Dec-2015 to Aug-2016	YAMGAZ YAMAL LNG PROJECT	Siemens	Supply, Fabrication and Installation of HVAC Package Ducting for Substation



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## LIST OF MAJOR CONTRACTS AWARDED

Picture	Year	Vessel Name	Yard/Owner	Description of Works
	Feb-2015 to May-2016	B360	Keppel Fels	EPCC ( Engineering, Procurement, Construction & Commissioning ) Renewal of Air Conditioning Suystem in Accommodation Design, Supply, Installation and Commissioning Work
	Feb-2015 to Aug-2016	H390	Keppel Singmarine	EPCC ( Engineering, Procurement, Construction & Commissioning ) Renewal of Air Conditioning Suystem in Accommodation Design, Supply, Installation and Commissioning Work
	Jan-2015 to May-2015	BALTIC	Global One	EPCC ( Engineering, Procurement, Construction & Commissioning ) Renewal of Air Conditioning System in Accommodation Design, Supply, Installation and Commissioning Work
	Nov 2013 to Oct 2014	FPSO BUKIT TUA	Keppel Shipyard	EPCC (Engineering, Procurement,Construction & Commissioning ) Turnkey Design, Fabricate, Assemble of HVAC Equipment for New Build of Galley, Stearing Gear Room & Fire Pump Room, includes Installation, Hock Up, Termination, Testing, Commsioning with Supporting Marine & Offshore Recognition Engineering Documentation Dossier.
	Dec 2013 to Mar 2015	FPSO IKDAM	Keppel Shipyard	EPCC (Engineering, Procurement,Construction & Commissioning ) Turnkey Design, Fabricate, Assemble of HVAC Equipment for New Build of 3 nos of Process Electrical Module, includes Installation, Hock Up, Termination, Testing, Commsioning with Supporting Marine & Offshore Recognition Engineering Documentation Dossier.
	2013 to 2014	MANGALA (Electrical House)	Wasco	EPCC (Engineering, Procurement,Construction & Commissioning ) Turnkey Design, Fabricate, Assemble of HVAC Equipment for New Build of Accommodation, FPSO Electrical House, Generator Room & Crude Oil Room, includes Installation, Hock Up, Termination, Testing, Commsioning with Supporting Marine & Offshore Recognition Engineering Documentation Dossier.
	Mar 2013 to 2015	THSD Inai Kenanga (H009)	SPCO Marine/ Malaysia	EPCC (Engineering, Procurement,Construction & Commissioning ) Turnkey Design, Fabricate, Assemble of HVAC Equipment for New Build of Accommodation and Provision Stores, includes Installation, Hock Up, Termination, Testing, Commsioning with Supporting Marine & Offshore Recognition Engineering Documentation Dossier.
	Feb 2014 to May 2015	FPSO NINGALOO VISION	Keppel Shipyard	( Fabrication, Construction & Commissioning ) Fabricate and Assemble of Electrical House Ducting, Includes Installation and Hock Up.

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## SPCO GROUP OF COMPANIES

### SINGAPORE (HQ)

**SPCO HOLDINGS PTE.LTD**  
**SPCO ENGINEERING PTE.LTD**  
**SPCO ENERGY PTE.LTD**  
**GS OFFSHORE PTE.LTD**  
**GS HYDRAULIC PTE.LTD**  
**HI-TECH MARINE PTE.LTD**  
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