



Global Ship Solutions Inc.
Canada Corporation: 1117971-3
101, 5955 Yew Street
Vancouver, BC, V6M 3Y7, Canada

Fernandez Jove Group Europe – Introduction to Canada (Design and Manufacturer of Hydraulic Systems, Marine Valves and Cable Transits)

Respected,

Global Ship Solutions Inc. (GSS Inc.) is a proud Canadian company working in the shipbuilding industry and is the representative of FJ Group (Fernandez Jove Group) Europe in Canada.

For more than forty years, FJ Group has been a synonym of quality and excellent service in different sectors such as naval and industrial ones and becoming a benchmark in fields like **flow- control, hydraulics, marine valves, and electrical cable transits.**

GSS Inc. + FJ Group team together involves in different activities. From carrying out comprehensive design and manufacture for various systems for complex projects and distribution and supplying of various equipment to clients.

GSS Inc. + FJ Group team together performs engineering, manufacturing, and installation as required, and provides life cycle support.



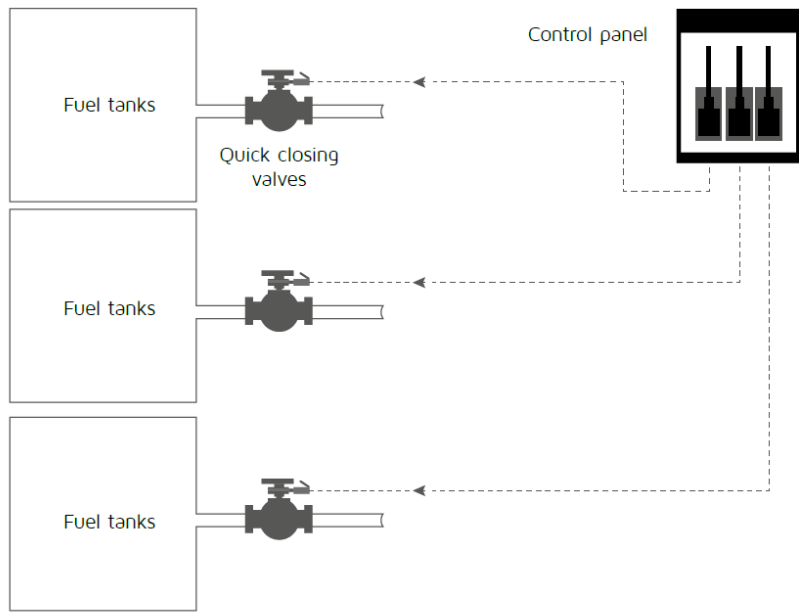
INTRODUCTION TO THE SYSTEM

Quick closing valve system allows the instantaneous shutoff of fluid lines in case of emergency (such as leak or fire).

Our systems are composed by valves and control panels. The valves are installed in potential flammable liquid lines (fuel, oils, etc) or at the outlet of tanks, whereas the control panel is installed in a safe area.

GENERAL COMPOSITION OF THE SYSTEM:

- Control panel (hydraulic, pneumatic or electro-pneumatic).
- Quick closing valves






















FJ Group offers the complete quick closing system, from engineering with the project information, the manufacture of the control panel (hydraulic, pneumatic or electro-pneumatic) and the manufacturer of SAVAL valves (SAVAL is the valves brand of the FJ Group).

- Engineering and System design
- Fabrication of panels and drive cabinets
- Fabrication of valve and Pulse units under the Saval brand

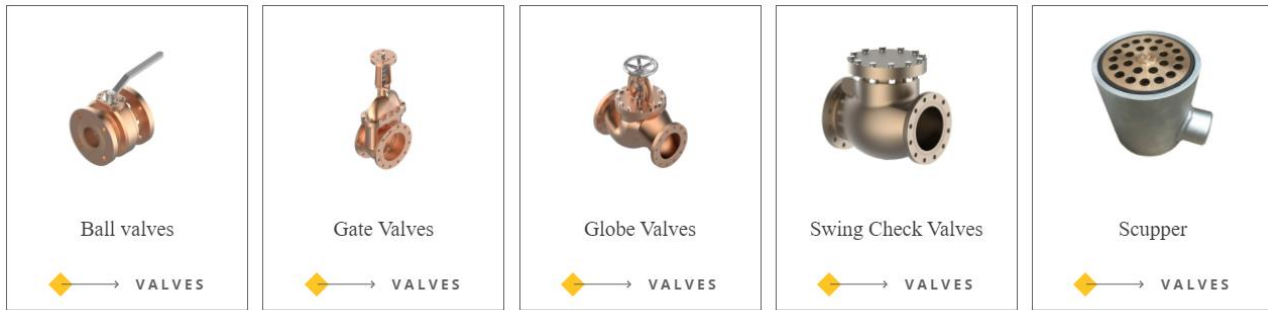
Standard Valves

Shipbuilding, offshore, petrochemical, telecommunications and chemical industries, food and rail. Our wide range of Shock Test valves meet the most difficult navy standards.

 Gate Valves  → VALVES	 Ball valves  → VALVES	 Fire Valves  → VALVES	 Mud Box & Strainers  → VALVES	 Storm Valves  → VALVES
 Spring Safety Valves  → VALVES	 Swing Check Valves DIN Length  → VALVES	 Quick Closing Valves  → VALVES	 Globe Valve DIN Length  → VALVES	 Scupper  → VALVES

Navy Valves

Our wide range of “Shock Test” valves meets the most difficult navy standards.



QUICK-CLOSING VALVES

FJ includes SAVAL brand valves in its quick-closing system, a company which belongs to Fernández Jove group, and which has been specialized in the manufacture of high-quality marine valves for more than 50 years.



SAVAL | Marine Valves
www.valsaval.com

Saval valves have been approved by the standards of Lloyd’s Register, which certifies their design and guarantees their correct functioning under critical conditions.

The base of our valves is an integral metal seated, which ensures its durability and therefore, avoids short-term corrosion.

SAVAL Quick closing valves can be operated in three different forms by using the same release mechanism.

- Pneumatic
- Hydraulic
- Manual





Q uick-closing systems, as critical passive safety elements in both naval and industrial sectors, must guarantee their correct operation with total reliability in case of emergency.

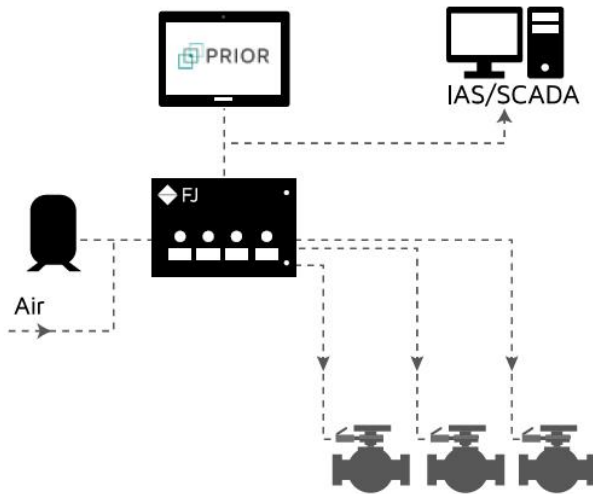
FJ offers high-performing systems, designed for the most demanding settings, always manufactured with high-quality materials and with full traceability of both its components and production processes.



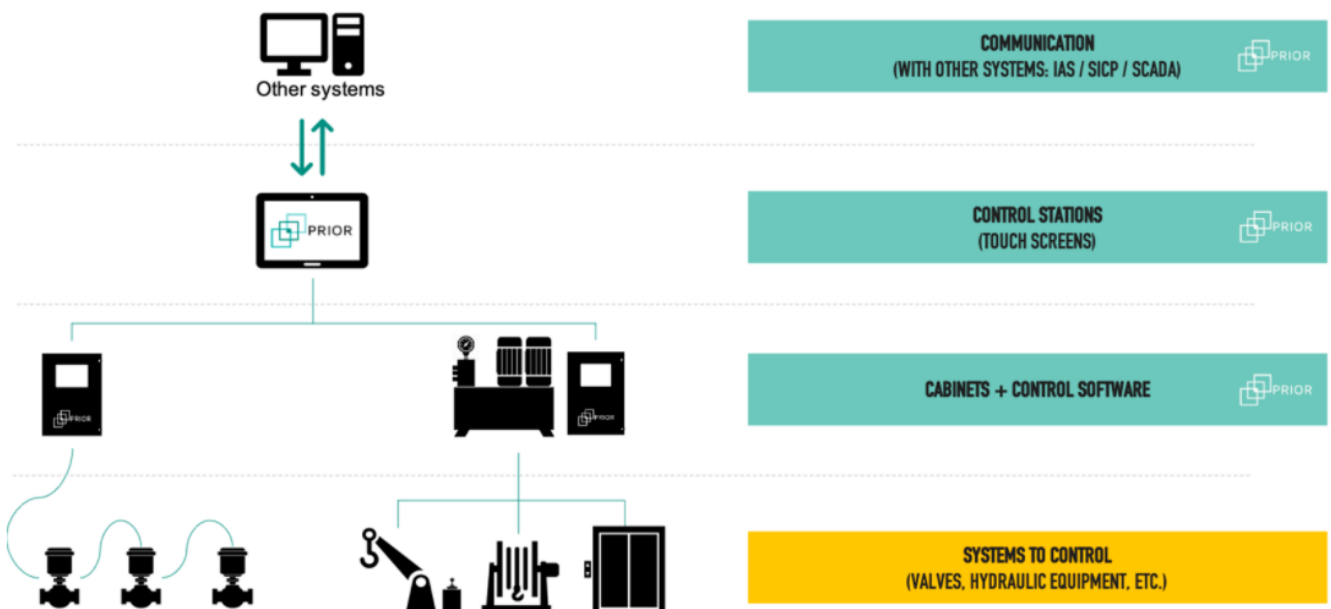
ELECTROPNEUMATIC CONTROL

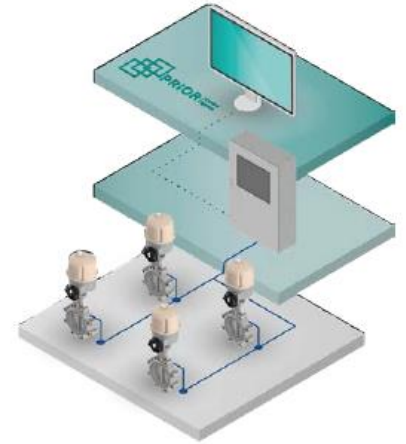
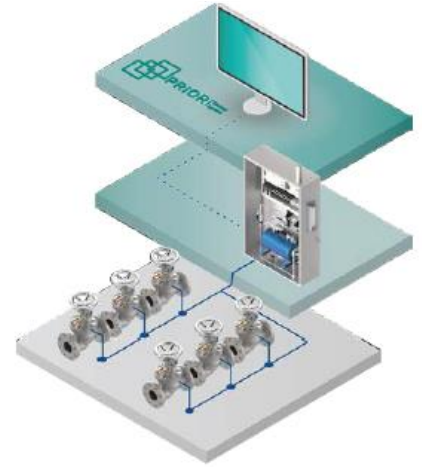
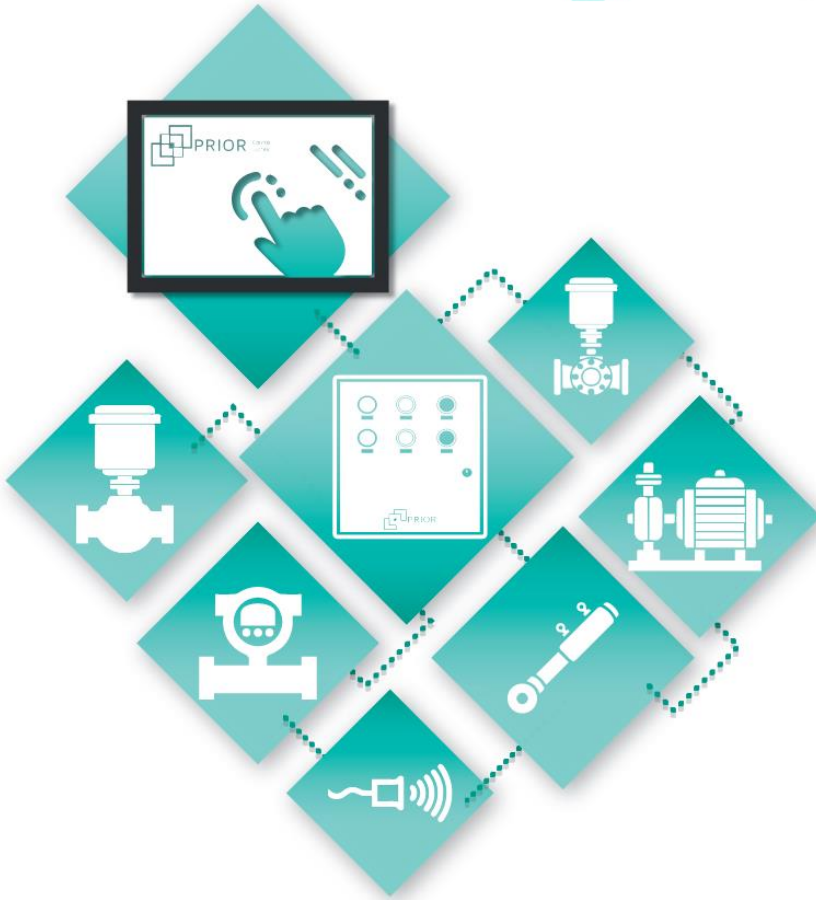
The electropneumatic control system maintains the functionality of the pneumatic ones, but it adds electrical components to improve the functions of remote control and connectivity.

These equipments include solenoid valves in parallel with the manual push button, which makes possible to close the valves from another system or from keypads.



What is it made of?





PRIOR | VAL
CONTROL SYSTEM

FJ's electropneumatic drive cabinet can include a PLC and incorporate PRIOR|VAL control system, developed by Fernández Jove.

Adding PRIOR|VAL to the quick closing system enhances its use, as it can be monitored on a control screen or connected to other superior systems (such as IAS or SCADA), by using fieldbus or other options.

By doing this, the alarms could be displayed, check the situation of all the valves (open/closed) and activate them remotely.



For more information, get to know PRIOR | VAL control system

WWW.PRIORCS.COM





PRIOR Valves

Specific solution for monitoring and control of actuated valve systems.

PRIOR|VAL



PRIOR Maneuvering equipment

Specific solution for the monitoring and control of maneuvering equipment, mainly hydraulic and pneumatic.

PRIOR|MEQ

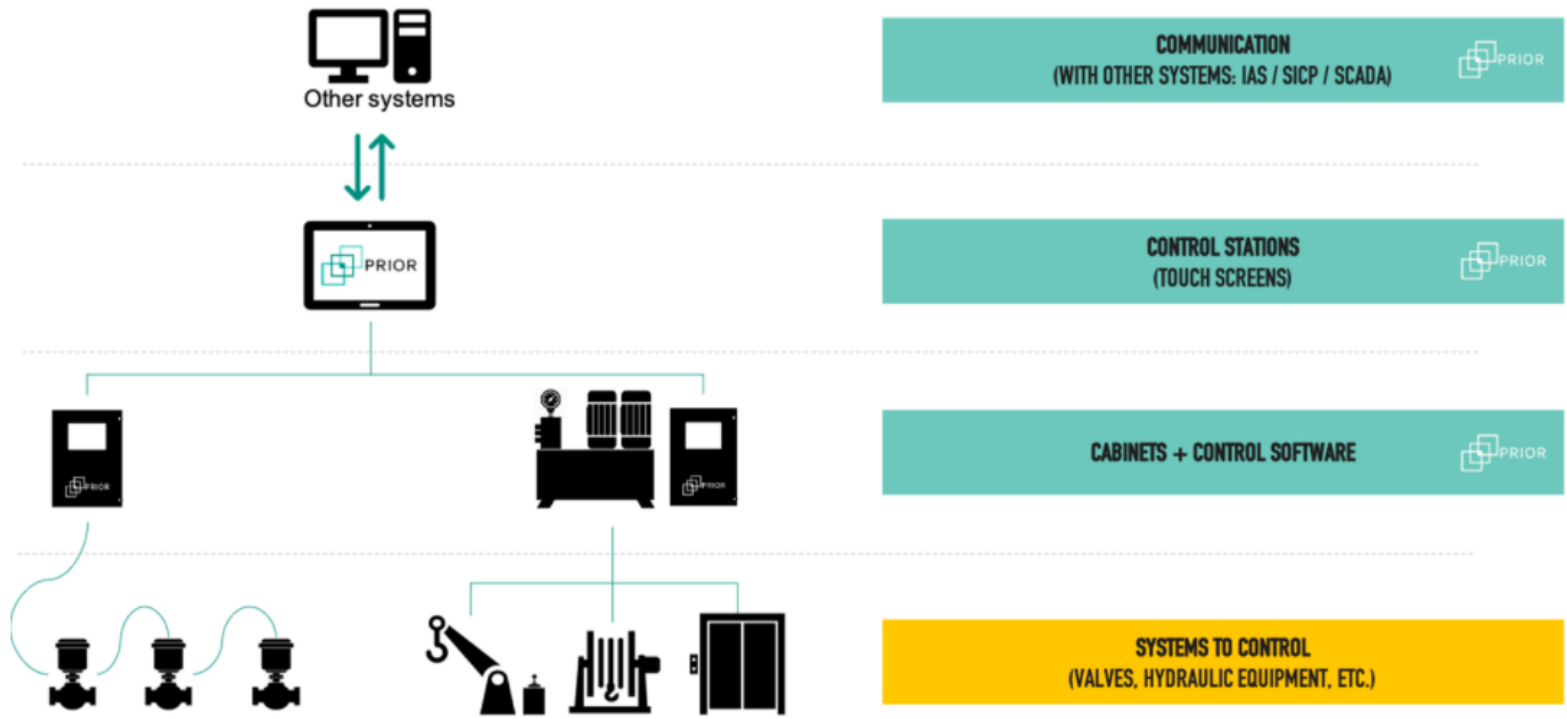


PRIOR Sensors

Specific solution for monitoring sensor, transmitter or switch systems.

PRIOR|SENS

► What is it made of? ◀





GSS



FERNÁNDEZ JOVE
group

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HAWKE | Transit System



**CABLE AND PIPE PENETRATIONS
SEALING SYSTEM**

WWW.HAWKE-HTS.COM

About HAWKE TRANSIT System

Founded in 1985, **HAWKE** Transit System has a broad experience in Product Development, System Design, Manufacturing, Supply and Inspection.

Manufacturing meets the highest quality standards to coincide with our demanding industry certification requirements. Our products are 100% European manufactured.

HAWKE Transit System products guarantee the integrity of cable and pipe penetrations through fire walls, decks or bulkheads. Our system inhibit against risks from hazards such as:

- Fire
- Smoke
- Water Ingress
- Toxic gases
- Attach by vermin

The **HAWKE** Transit System offers cost effectiveness, speed of assembly, flexibility and total inspectability of the installation. HAWKE Transit System sealing systems can be used in *new installations* as well as in *old ones*.(retrofit applications).

Acquired in 2005 by Fernandez Jove Group, with headquarters in the Europe. HAWKE Transit System has a global reach with offices and distributors all around the world. We have an agreement to a Canadian company **GSS Inc.** to represent us in the territory of Canada.

The HAWKE Transit System has been designed to meet the exacting demands of some of the most onerous hazardous areas tha can be expected on land and the sea.





ADVANTAGES OF HAWKE TRANSIT SYSTEM

◆ Speed of installation

Due to the special design of HTS products, installation and inspection time can be over 50% less than those products that require onsite modification.

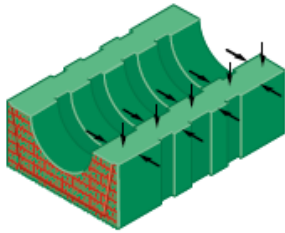
◆ No onsite modifications needed

Modification of any product is a process that can lead to human error. When using blocks that have to be modified, the installation contractor must make the correct decision each time he or she modifies a block.

Indeed, on a large project where thousands of blocks have to be modified, the chance that they would all be modified correctly is unlikely. Errors in modification to any sealing block will result in the installation's integrity against; gas, water and fire protection being completely lost.

When using Hawke products, the installation process is very simple: select a specific Tolerant block and install it immediately onto the respective cable. The speed of installation dramatically reduces labour costs when compared to alternative products.

Also, HTS's colour-coding system removes the doubt by confirming that two correct halves are selected and installed on each cable.

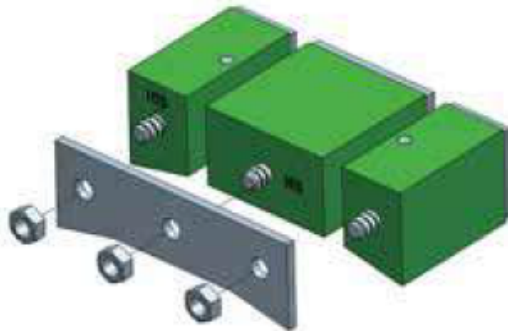


◆ Tolerant block size range

Each block is manufactured incorporating five sealing faces and four sealing grooves along the internal faces, which are displaced by the sealing process.

This results in a tolerance of up to 4mm for cable/pipe diameters in the same block, without the need of any onsite modifications.

The five sealing faces allows for correct sealing of cables/pipes with an inconsistent outer diameter or shape. Services do not have to be completely circular to be sealed within our Tolerant Blocks.



◆ **Total Inspectability**

The individual block halves are clearly **colour-coded** and they also display the maximum and minimum diameter of cable/pipe which it is designated to seal.

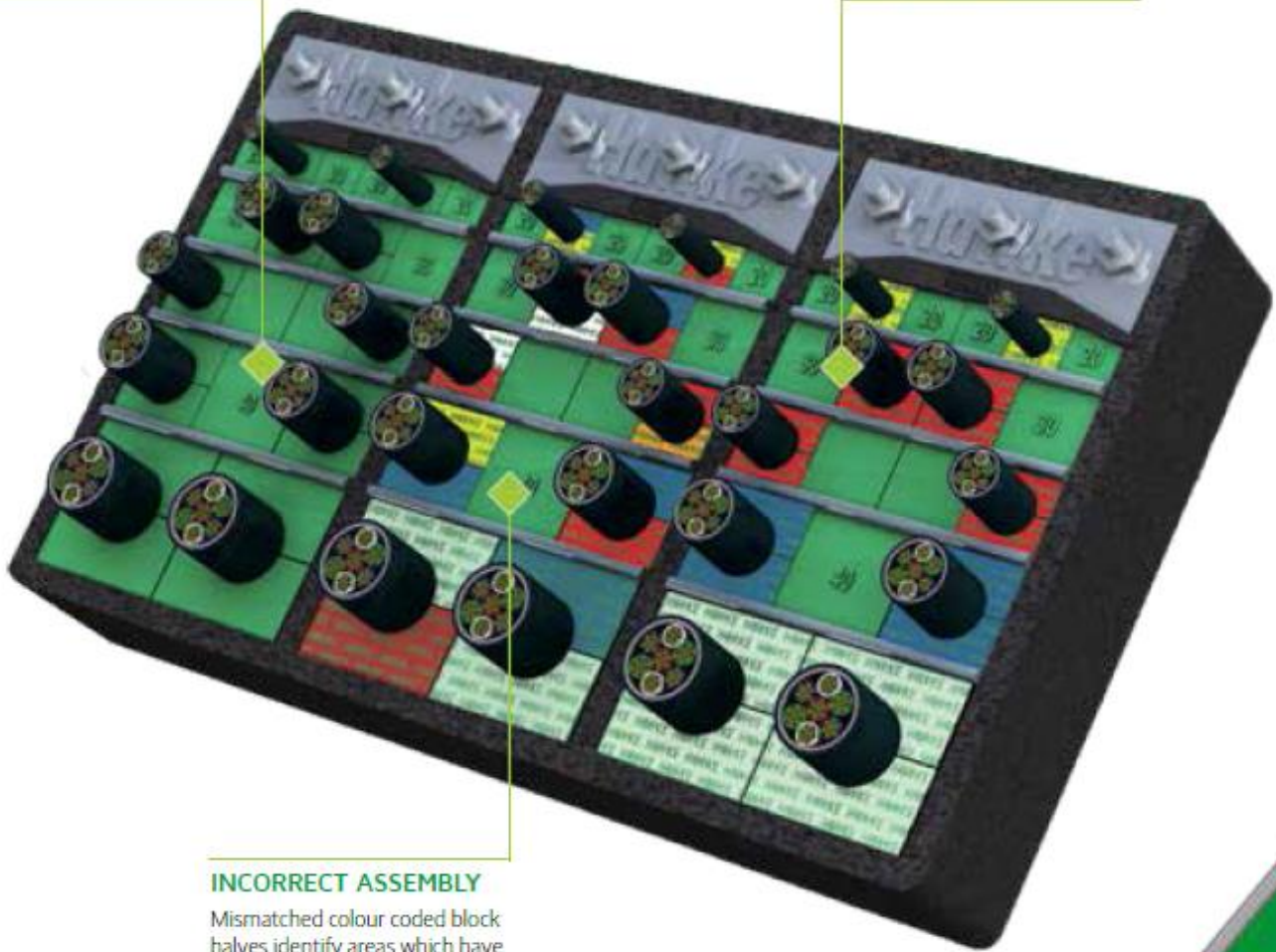
The colour coding allows the inspector to clearly identify that the blocks have been correctly sized for the cable or pipe. Without colour-coding, it is extremely difficult to inspect/verify that the system has been installed correctly.

INCORRECT ASSEMBLY

Without colour coding incorrect assembly is impossible to detect.

CORRECT ASSEMBLY

Colour coded block halves provide visual confirmation of correct assembly.



INCORRECT ASSEMBLY

Mismatched colour coded block halves identify areas which have been incorrectly assembled.

◆ **No waste material**

Due to our Tolerant Blocks **not needing to be modified onsite**, there is therefore no scrap material to dispose of.

This means that potential hazards and hidden costs associated with the disposal of waste products are removed.





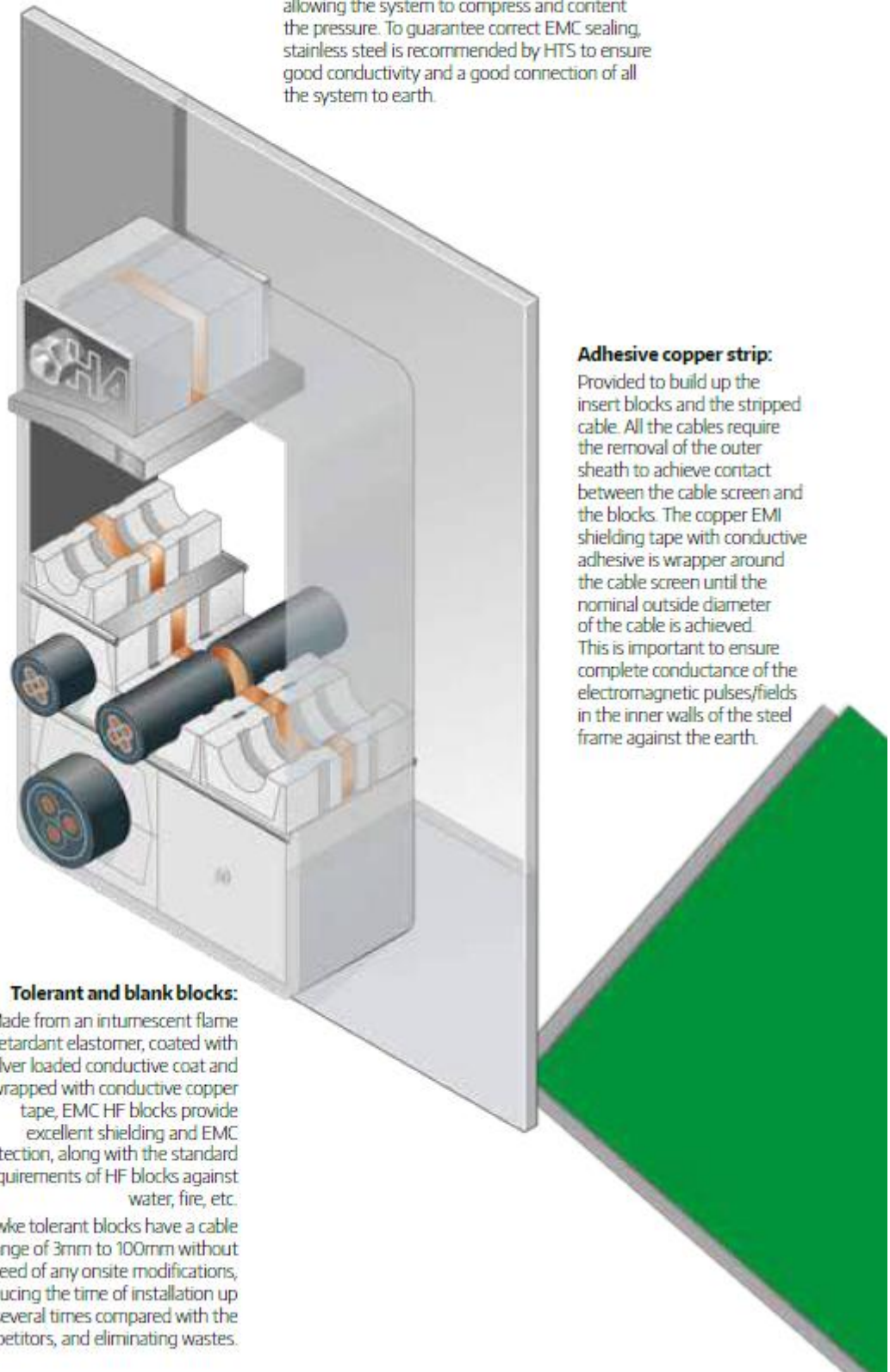
Compression system:
Needed to apply pressure to the system and complete the seal once the rest of the services have been installed. The 3 part endpacker transmits an evenly distributed pressure onto the compression plate, and ensures an effective seal around the cables. The conductive coat and the copper tape guarantee that the EMC requirements are maintained.

Stayplates:
Installed to anchor insert and filler blocks into the frame and ease assembly, stainless steel stayplates also increase the conductance throughout the system to ensure effective shielding and EMI protection.

Tolerant and blank blocks:
Made from an intumescent flame retardant elastomer, coated with silver loaded conductive coat and wrapped with conductive copper tape, EMC HF blocks provide excellent shielding and EMC protection, along with the standard requirements of HF blocks against water, fire, etc.
Hawke tolerant blocks have a cable range of 3mm to 100mm without the need of any onsite modifications, reducing the time of installation up to several times compared with the competitors, and eliminating wastes.

Frame:
Hawke steel frame is attached to the structure and forms the surround of the penetration, allowing the system to compress and content the pressure. To guarantee correct EMC sealing, stainless steel is recommended by HTS to ensure good conductivity and a good connection of all the system to earth.

Adhesive copper strip:
Provided to build up the insert blocks and the stripped cable. All the cables require the removal of the outer sheath to achieve contact between the cable screen and the blocks. The copper EMI shielding tape with conductive adhesive is wrapper around the cable screen until the nominal outside diameter of the cable is achieved. This is important to ensure complete conductance of the electromagnetic pulses/fields in the inner walls of the steel frame against the earth.



APP Hawke Transit Installers App

Hawke Installers App makes it easier and faster to carry out the installation of your transit installations.



Designed to be launched from a portable device iOS or Android (smartphone or tablet). The Installer's App allows the installer to calculate automatically the best configuration for a transit, it exports the material list, drawings with colour-coding and other important information.

Also, the installer can consult product information, installation instructions/tips, watch the installation videos and contact Hawke Transit System for technical support. All of these features help to reduce installation time and avoid potential installation mistakes.

CHARACTERISTICS

- ◆ Save time installing your projects.
- ◆ Calculate automatically or manually the best combination of materials.
- ◆ Modify and adapt configurations manually.
- ◆ Export material list, reports and installation drawings.
- ◆ Modify cables positions directly on the drawing.
- ◆ Preview the transit with colour coded blocks.
- ◆ Export a project summary for requesting a quotation quickly.



FJ Group maintains a highly specialized technical staff in the field of flow-mangement, hydraulics, pneumatics and process automation.

This allows us for the development of personalized solutions to the necessity of each project, from basic engineering to key-in-hand supplies, and comes with a high degree of flexibility.

Conceptual and basic engineering



- Basic design of hydraulic, pneumatic and electric systems, or other specific ones. ✓
- Definition and design of control systems ✓
- Selection and specification of instrumentation and valves ✓
- Engineering calculations, preliminary studies and technical reports ✓
- Technical specifications of systems and equipment ✓

Detail engineering

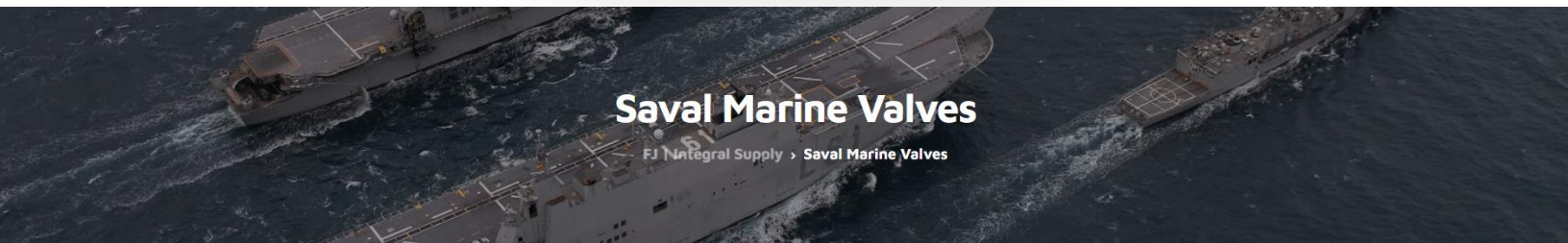


- 3D modelling, 2D extraction and shape optimization ✓
- Diagrams and calculations of mechanical, hydraulic and pneumatic installations ✓
- Construction and assembly works plans ✓
- Electrical and wiring diagrams, etc. ✓
- Preparing material lists ✓
- Equipment and control system programming ✓
- Testing and commissioning ✓

Integrated logistics support



- Technical data and logistics documentation package ✓
- Technical training ✓
- Operation manuals ✓
- Maintenance manuals ✓
- Quality documentation ✓

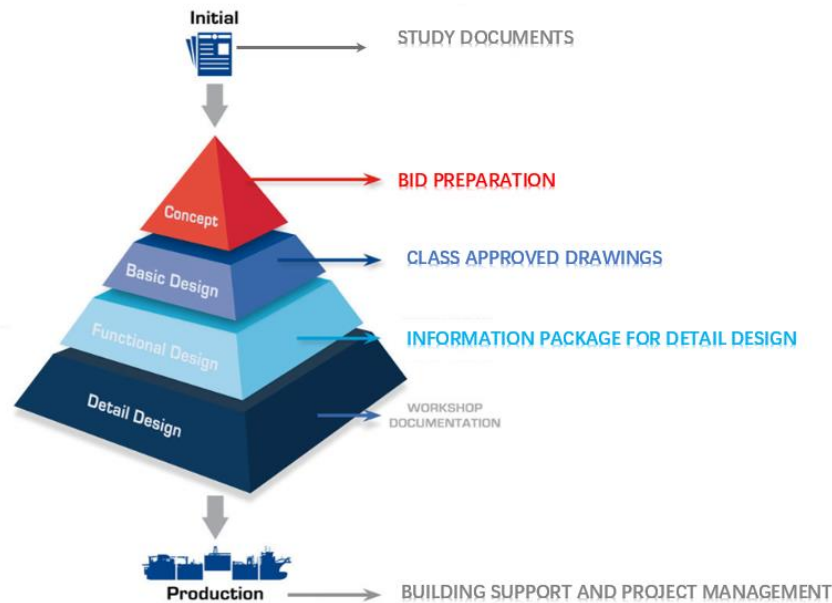


Global Ship Solutions Inc. Introduction:

Global Ship Solutions (GSS Inc.) is a Canadian shipbuilding and marine client representative company. GSS Inc. is well-equipped to act as a driving engine into the success of the construction and life-cycle support for Defense shipbuilding projects in Canada.

GSS Inc. team of experts includes Naval Architects and shipbuilding consultants with many years of domestic and International Shipbuilding experience with industry gold standard credentials such as Professional Engineering (P.Eng.)-EGBC, Risk Management Professional, Chartered Professional Engineering (C.Peng.) and Master in Business Administration.

We act as Marine Sales representatives and Naval Architecture representative’ consultants in all stages of shipbuilding projects with a GSS Inc. vision of the pyramid support process.



Using the Project Management Institute (PMI) methodology and bringing in current multi-dimensional industry best practices, such as agile and lean project management it is GSS beings in value preposition of 1:10. With every dollar business given to GSS, it will result in an average savings of \$10.



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GSS Inc. is a proud Canadian company established in BC, offers products and services for the marine industry through its associate shipyards and engineering companies, passing through the company's suppliers of equipment and supplies, joiner companies, outfitters, electrical installers, electrical motors and generators, and water treatment systems.

Please let us know if you would like to discuss further the potentials solutions we can provide to your shipbuilding enterprise.

If you are interested, we can forward you the corporative **FERNANDEZ JOVE** Group presentation, together with a portfolio of commercial and Navy ships' projects – NATO Worldwide, for your perusal.

Our team of Naval Architects shall be delighted to organize a Microsoft Teams Meeting to discuss with you in more detail with our intention to become your long term partner.

Best Regards,

JP Moolan, Vice President | BEng MRINA | Naval Architect |Global Ship Solutions Inc. |Cell +1 (778) 512 7791

