

Series 30 - Cartridge Valve System

“Design philosophy for the next Millennium”



The design philosophy behind the Series 30 creates a very flexible cartridge valve system, using standardised parts. Five different valve body sizes are available, with a complete range of valve inserts to suit. Stop, Non-return, Screw-down Non-return, Relief, Back Pressure Maintaining and Auto-Shutdown valves are all available for each size of valve body selected. Full type tests have been undertaken and the Series 30 Cartridge Valve System is approved by the UK Ministry of Defence. Series 30 Cartridge valves are used in Hale Hamilton's New Generation Reducing Stations - please ring, fax or write for further details.

=NGRS=

The Application



The original cartridge valve insert systems, designed some 30 years ago, have found application on-board submarines. Whilst these historic applications remain, Hale Hamilton - the UK's most established high pressure valve design authority - offer a completely new concept in cartridge valve design philosophy. This philosophy embodies the latest thinking in valve insert design: housed in valve 'bodies' as the Series 30 range; incorporated in the Company's New Generation Reducing Stations as the NGRS range; and featuring in both - the innovative Auto-Shutdown safety valve. Today, new applications may be found on-board both submarine and surface ship alike.

The Advantages

Interchangeability - In supplying a standard range of valve bodies for all different valve inserts, Hale Hamilton can offer a most flexible valve system. The valve bodies are permanently fitted in the vessel's pipe-work systems, either using conventional couplings or welding-in-line. Valve application is made by simply selecting the valve inserts required. Each complete valve is self-contained within its own cartridge insert. Hale Hamilton's Series 30 Cartridge valve inserts also offer the unique advantage of being Form, Fit & Function interchangeable. Hale Hamilton's New Generation Reducing Stations (NGRS) use the same valve inserts. Specifying both Series 30 and NGRS offers the most complete valve system available on-board today.

Performance - The 'Y' shaped passageway through each valve provides the best possible flow characteristics with minimal pressure drop. Detailed design features are incorporated such as the external positioning of all threads from the flow; Open / Closed indication; Self-centring, and Non-rotating seals for example. These ensure reliability, high performance and a long in-service life.

Integrated Logistics Support

- Reduced base, depot & on-board spares - means lower in-service costs.
- Series 30 Cartridge valve inserts may be easily removed and replaced for maintenance & repair - minimising system downtime and therefore maximising the vessel's systems availability.
- Repair & Refurbishment - by simple & quick cartridge replacement. Repair on-board, at base or through Hale Hamilton's dedicated Repair Service.
- Series 30 Cartridge Valve Inserts - interchange with the New Generation Reducing Station Cartridge

“Over 50 years Supplying to the world's Navies”

For more information contact:-

HALE HAMILTON (VALVES) LTD

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Series 30 - Technical Data - Series 30

General Characteristics - The Series 30 are designed for continuous service in the aggressive submarine environment. Comprising five basic cartridge sizes, in a 'Y' pattern body, a full range of valves for 280 bar systems is available. These cartridges in turn fit in to valve bodies, which are compatible with 70/30 cupro nickel tubing in the range 6mm to 57mm M.O.D. These may be either welded in-line or connected using conventional pipe couplings.

Stop Valves - These manually operated valves are fully pressure balanced and combine controlled opening with full lift, in less than 6 turns of the handwheel. The design philosophy embodies working surfaces external to the flow, which promotes cleanliness; and non-rotating seals, helping to maximise MTBM. Open / closed position indication is standard, both visually and to the touch.



Stop Valve

AutoValves - Where a 'no flow' safety system is required this range of valves offer downstream pressure isolation. They are a self-contained "snap action" device activated by a pre-set over pressure. Manual override and open/closed position indication are standard. Remote indication is optional.

Filters - Designed for access without disturbing any pipe work, the filter elements can be cleaned and re-used. Filter drains are also available.

Relief Valves - Safety valves designed to suit specific requirements or general protection are available for all body sizes.

Non-Return Valves - All these valves have a positive seal design, are damped against oscillation, and allow full lift for minimum pressure drop.



Non-Return Valve

MoD Approved

Qualification testing has been carried out for each generic range, through development with the UK MoD to meet Military ship born requirements, including endurance (500 cycles), shock (3000 m/s²), high flow (300 nm³/min), and pressure (420 bar) testing.

Company Information

Hale Hamilton utilise the most up-to-date CAD / CAM methods for design and manufacture. State of the art CNC machining centres are extensively used, backed by conventional machining and traditional skills in support of the Company's commitment to Integrated Logistics Support (ILS). In addition to a dedicated Repair Section, an experienced Customer Support team is always available to inspect, install and commission equipment world-wide.



Quality Assurance

Hale Hamilton (Valves) Limited operates a Quality Management System accredited by LRQA to BS EN ISO9001:1994. Specific customer quality requirements can be accommodated. Equipment can be designed to conform to many major independent Approval bodies including; Lloyds Register of Shipping (LRS) and Germanischer Lloyds (GL), for example.

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