

New Generation Reducing Stations

“Design philosophy for the next Millennium”

NGRS - Today's naval warship design demands equipment which positively contributes to overall systems efficiency. Hale Hamilton's **NEW GENERATION REDUCING STATION** design innovation, significantly impacts size, weight and maintainability while offering the most cost effective solution to pressure reduction available today.

The Applications

Hale Hamilton's New Generation Reducing Stations are specified for: Gas Turbine & Diesel Engine Start; Gas Turbine Air Supply; Diesel Generator Start; Emergency Air Supply; Weapons Handling; Fire Fighting, and Workshop Air to name but a few typical applications. New Generation Reducing Stations use Hale Hamilton's "Series 30 Cartridge Valve System Inserts" - please ring, fax or write for further details.

=SERIES 30=



The Advantages

- **Compact**:- Reduced weight & space envelope contributing to an improved power to weight ratio.
- **Safety**:- Immediate response to down-line system pressure overload - offering greatly enhanced system safety. Automatic shutdown - maintaining compressed air resources. No full bore relief valve required - means reduced noise & less pipe-work. Manual override - offering the functionality of an outlet stop valve. Valve position indicator - signaling control both locally & remotely.
- **Cartridge System**:- Improved maintainability - allowing ergonomic repair & overhaul. Reduced system downtime - improving vessel operational capability.
- **Flexibility**:- Full range of system pressures & flows available - suitable for nearly every application. Compact size - easing installation in tight spaces.

The Track Record

Hale Hamilton's Valves, Reducing Stations (Manifolds) and Control Panels are in-service extensively with many of the Navies of the World today. All major International surface ship and submarine programmes including: Type 23 (UK), SRMH (UK / Saudi Arabia), Gaeta (Italy), F122 (Germany), Godavari (India), Anzak (Australia), AOE (USA), ADI MH (Australia), Trident, SSN (UK), SSK (UK), A19 (Sweden), Collins (Australia), Type 209 (Germany - various navies), Sauro (Italy) and Walrus (Holland) are equipped with both standard and custom designed Hale Hamilton products.

“Over 50 years of Innovation in Valve Technology”

For more information contact:-

HALE HAMILTON (VALVES) LTD

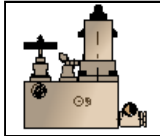
OFFICES IN UNITED KINGDOM ● SINGAPORE ● GERMANY



NGRS - Technical Data - NGRS

General Characteristics: The NGRS range are a compact manifold based, air pressure control station. They comprise the HHV "Series 30 Cartridge Valve System", including supply and outlet stop valves, regulator, filter, pressure gauge and isolating valve, bypass (if required), auto shutdown valve or relief valve (as appropriate). They are primarily used for pressure reduction, typically from 345 bar air storage systems. There are four sizes meeting a wide range of pressure/flow applications. The type number designates the basic size.

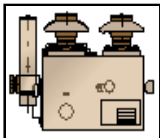
NGRS 1000



Size 1 Reducing Station - 6mm size Spring loaded controller.
10mm outlet passageway
Flows up to 20nm³/min.*
Outlet pressure range 10 - 207 barg

This single block pressure reduction station can be configured to accommodate Bypass, Auto Shutdown, or full bore Relief valve.

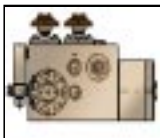
NGRS 2000



Size 2 Reducing Station - 13 mm size Dome loaded controller.
20mm outlet passageway
Flows up to 100nm³/min.*
Outlet pressure range 10 - 207 barg

This reducing station, incorporates a Dome loaded regulator and as with all of these control systems, can be configured to accommodate By-pass, Auto shutdown, or full bore Relief valve.

NGRS 3000



Size 3 Reducing Station - 25mm size Dome loaded controller.
25mm outlet passageway
Flows up to 175nm³/min.*
Outlet pressure range 10 - 207 barg

Using the basic building blocks from the Series 30 range the station can be configured to suit customers' requirements. All valves (except NGRS1000) incorporate soft seats of mitre design and are pressure balanced for ease of operation.

NGRS 4000



Size 4 Reducing Station - 38mm size Dome loaded controller.
38mm outlet passageway
Flows up to 250nm³/min.*
Outlet pressure range 10-207 barg

* Flows may be higher but are dependent on the outlet pressure requirements.

Shock-Vibration-Noise. Developed from a product range fitted to ships and submarines world-wide, the NGRS are UK MoD compliant with NES314; the New Generation Reducing Station encompasses this proven design philosophy and qualification testing is as undertaken within the Series 30 Cartridge Valve range. The tests include endurance (500 cycles), shock (3000 m/s²), high flow (300 nm³/min air) 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 - Reg No. 861113. 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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