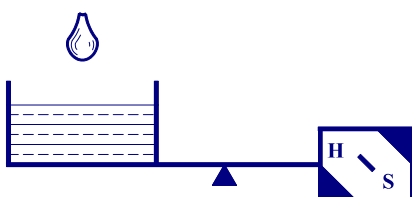


## GAS PURGE COMPRESSORS MODELS HS-55 /HS-45/ HS-55DO/HS-55DB



- **Innovative, Maintenance Free Gas Purge System for Water Level Measurement**
- **Durable Industrial Strength Compressor for Years of Continuous Reliability**
- **13.5 Litre/3.5 Gallon Receiver Tank for Superior Purging Capability**
- **Fully Integrated 2 Stage Air Drying System with Oil/Moisture Trap & Hydrophobic Filter**
- **Operating Temperature Range: -30°C to +80°C**
- **Suitable for Use with Most Pressure Transducers & Data Loggers**
- **Maintenance Free for 8 Years**
- **OH & S Answer to Heavy Gas Bottles**



ISO  
9001

QUALITY SYSTEM  
CERTIFIED

**HYDROLOGICAL SERVICES PTY.LTD**  
HYDROLOGICAL INSTRUMENTS & EQUIPMENTS  
DESIGNED AND MANUFACTURED  
BY HYDROLOGISTS

## DESCRIPTION

The Gas Purge Compressors have been designed to replace the conventional nitrogen gas bottle supply to bubble units/gas purge systems for water level measurement.

There are four models available:

- HS-45
- HS-55
- HS-55DO
- HS-55DB

The use of industrial strength components for guaranteed reliability, a large capacity 13.5 Litre/3.5 gallon receiver tank for superior purging capability and a 5 year maintenance free, two stage air drying system sets the Gas Purge Compressor apart in quality, reliability and performance.

The design of the unit centers around the tried and proven Hydrological Services Model HS23 Dry Bubble Unit with Differential Regulator (BU02). All compressor models incorporates a maintenance free Air Drying System that utilises a "Self Purging" Membrane Filter Dryer and Auto Drain Moisture Traps to ensure a moisture free system. The effectiveness of the Compressor Filter-Dryer is such that the unit also removes up to 20% of oxygen from the air it dries, thus helping to reduce aquatic growth at the river end. The unit is maintenance free for up to 8 years.

## VOLTAGE REGULATOR PROTECTION

If the pressure lines or fittings on the compressor develop a leak that cause the loss of air pressure in the system, the air compressor could run continuously as it attempts to fill the air receiver. If this occurs, the system voltage could fall below 12 Volts. At 11V the voltage regulator switches off the power to the motor until the battery is recharged to 12V at which time the system will commence normal operation. This feature protects the compressor pump and motor from damage.

## GAS PURGE COMPRESSOR MODELS

### HS-45 MODEL

The HS-45 combines a compressor and regulator. It is designed as a replacement for gas bottles and can be used with all existing bubble units.



### HS-55 MODEL

The HS-55 is more advanced model, it has a 3-Way manual purge valve which operates as follows:

- Open Position:** indicates the river orifice line is open for normal bubbler operation.
- Close position:** indicates the river line is closed to the bubbler system.
- Purge position:** permits the river line to be purged at full tank pressure for a short duration.



The HS-55 has been designed and manufactured using the highest quality system components including two-stage air drying system and a rugged, durable, industrial strength compressor for years of superior field reliability.

## TWO STAGE "AUTO DRAIN" MOISTURE TRAP AND HYDROPHOBIC MEMBRANE FILTER DRYING SYSTEM

The system features an Auto Drain Oil/Moisture Trap. When the trap senses moisture build up, a relief valve is opened and the moisture is purged under pressure to atmosphere. The Hydrophobic filter then completely dries the compressed air, removing all moisture and up to 20% oxygen to reduce aquatic growth.

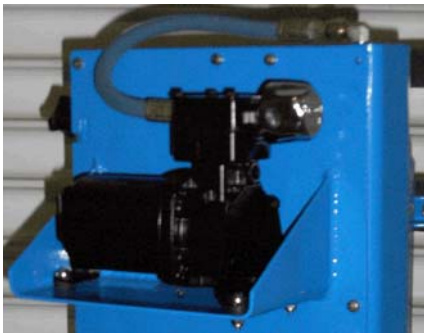
### SUPERIOR QUALITY RELIABILITY & PERFORMANCE

#### Precision Air Drying System.



With an auto-purging oil/ moisture trap, requiring cartridge replacement at 5 yearly intervals. **This ensures a completely moisture free system.**

**Voltage Regulator Protection** safeguards the system from continuous purging in the event a river line blockage cannot be cleared.



**Rugged, durable, industrial strength** compressor provides higher continuous output pressure for purging and receiver tank charging.

## HS-55DO MODEL



The Model HS-55DO is used in a situation where a site needs two orifices at two different level. Note one orifice can operated at the time while the other orifice is shut.

Note: one pressure transducer is required only.

## HS-55DB MODEL



The Model HS-55DB is used in a situation where a site needs two orifices operating simultaneously. The orifices can be at two different levels and two different locations.

Note: Two pressure transducers are required, one for each location.

## SPECIFICATIONS

<b>Power</b>	12VDC
<b>Maximum Current</b>	17 Amps
<b>Average Current Draw</b>	Approx. 14mA (based on 60 bubbles/min)
<b>Compressor</b>	Precision Piston
<b>Receiver Capacity</b>	13.5 litres (3.5 gallons)
<b>Normal Operating Pressure Purge</b>	60 p.s.i, 400 kpa to 80 p.s.i, 600 kpa
<b>Maximum Purge Pressure</b>	
<b>Minimum Purge Pressure</b>	85 p.s.i, 600 kpa
<b>Differential Pressure</b>	60 p.s.i, 400 kpa
<b>Duty Cycle</b>	3 p.s.i, 20 kpa to 5 p.s.i, 35 kpa
<b>Purging</b>	Less than 10 hours per year Manual - 3 Way valve (HS-55) Dual Water Level Units Available
<b>Air Dryer</b>	5 year maintenance free "Self Purging" Hydrophobic Filter
<b>Environment</b>	-30° C to +80° C standard (-40° C to +80° C optional)
<b>Pressure Connection</b>	Outlet 3/8" diameter tube, instrument 1/4" NPT male
<b>Mass</b>	Approx. 30 lbs, 13 kg
<b>Dimensions</b>	610mm x 305mm x 380mm ( 24"x12"w x 15"D)
<b>Construction</b>	Powder coated Aluminum, Wall mounted- template supplied
<b>Mounting</b>	Optional Bench mounting bracket available (part no. GPC70)
<b>Maximum Water Head</b>	30 metres (100 ft) using 200 metres (656 ft) of river line. <b>Note:</b> Water head increases for shorter river lines [i.e. 45 metres (150 ft) of water head with 100 metres (330 ft) of river line].

## OPTIONAL ACCESSORIES

<b>Pressure Transducer</b>	<b>Pressure Transducer</b>
Accuracy	WL3100/A +/-0.02% F.S WL2100D +/-0.05% F.S
Operating Temp	WL3100A -40° C to+ 70° C WL3100 -20° C to+ 70° C WL2100D -20° C to +70° C
Combined non linearity, Hysteresis and repeatability	WL3100/A +/-0.02 of full scale i.e. all ranges WL2100D +/-0.05 of full scale i.e. all ranges
Long term Stability	WL3100/A +/-0.05 of full scale per annum WL2100D +/-0.03% full scale per annum
Digitally Compensated temperature Range	WL3100A -40 to +70° C WL3100 -20 to +70° C WL2100D -20 to +70° C
<b>Transducer Calibration</b>	Each 10° C, 7 pressure points from 0 Kpa to maximum transducer range in Kpa. Calibrated over full specified temperature range.
<b>Pressure Line</b>	1/8" I.D. x 3/8" O.D. heavy wall black polythene SC078-01 300M (1000 Ft) Roll SC078-06 100M (328 Ft) Roll
<b>Orifice Fitting</b>	- Gas Chamber Orifice (part no. GCO1). - Copper Orifice mounted in Black polythene 2" pipe cap.

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