Engine Air Start Pressure Vessel Manifold and Control Unit

CE marked *

GS56 Manifold and Control Unit

SEETRU LIMITED

GS56 - Engine Air Start Pre

High quality engine air start control valve

The Seetru GS56 is a high quality control valve designed to handle a two-stage operation for air starting of engines. Air starting is typically used for diesel engines. The GS56 is bolted onto the air receiver vessel and integrates all the necessary functions and connections into one highly effective unit. It controls charging of the pressure vessel with the air for starting and it controls the flow of the air to the engine to start the engine. Incoming air and outgoing air are kept separate to comply with regulations. The unit configuration is designed so that any oil or water in the air supply collects in the receiver, thus maximising the cleanliness of the air which flows to the engine.

Patented Tutchtite sealing technology is used to provide positive sealing with finger light control of the isolating valves.

Sturdy and proven construction

The Seetru GS56 manifold system is a single high quality spheroidal graphite cast iron unit, which brings together all the necessary elements into an single, effective, high quality manifold and control unit.

The unique double-lipped D-ring Tutchtite sealing system is used to provide highly effective bubble tight valve sealing with only finger tight operation of the valves.

The airflow path is configured so that any oil or water in the air supply is fed to the bottom of the air receiver through a down pipe from the GS56 into the vessel. The cleaner air is then taken from the top of the vessel to start the engine, therefore maximising the cleanliness of the starting air. Oil and water can be siphoned out of the vessel using the drain valve.

All required features are provided with just one flange connection to the air receiver:

1. On-off valve for incoming air
2. On-off valve for outgoing air
3. Incoming & Outgoing air kept separate
4. Pressure gauge
5. Safety valve
6. Fusible plug
7. Drain valve
8. Inspectors test point

The GS56 is well proven, widely accepted and used across the world.

- ***Single unit, purpose designed to provide all necessary elements***
- ***Very well proven, widely used and accepted product***
- ***Exeptional ease of operation***
- ***Ease of maintenance***
- ***Ease of installation***
- ***Safe and Compact***

essure Vessel Manifold Unit

Economical in price and maintenance
Seetru is a high volume valve manufacturer and so is able to apply the latest large scale manufacturing technologies to ensure economic first costs. Economy in use is ensured by the ease of installation and simple maintenance procedure.

Safety valve
A threaded connection is provided on the manifold unit for a safety valve to protect the air receiver. Safety valves can be supplied as optional extras, contact Seetru for information on our range of safety valves. Note: an enclosed discharge valve may be prefered where equipment is protected by a fire control system.

Pressure gauge
A connection with shut-off valve is provided on the manifold unit for a pressure gauge, which can be fitted to monitor the pressure in the air receiver. Pressure gauges can be supplied as optional extras, contact Seetru for information on pressure gauges.

Fusible plug thermal protection
The GS56 has the facility for a fusible thermal plug to protect the air receiver from over-pressure due to heat (e.g. in the case of fire). The plug fuses at a defined temperature and releases the pressurized air in the receiver. Plugs are supplied as optional extras.

Siphon drain valve
An optional siphon drain valve can be supplied with the GS56. This valve is connected to a long tube, which reaches low into the receiver vessel; when opened, the pressure in the vessel forces any oil or water out through the tube.

Integrated inspectors test point
A connection is provided for connection of an inspectors pressure test gauge.

Enclosed discharge safety valve shown in illustration, a range of alternative safety valves available including atmospheric discharge

Accepted by Lloyds
Accepted by Lloyds for marine applications. Testing can be witnessed by marine approval authorities prior to despatch and certification provided at extra cost.

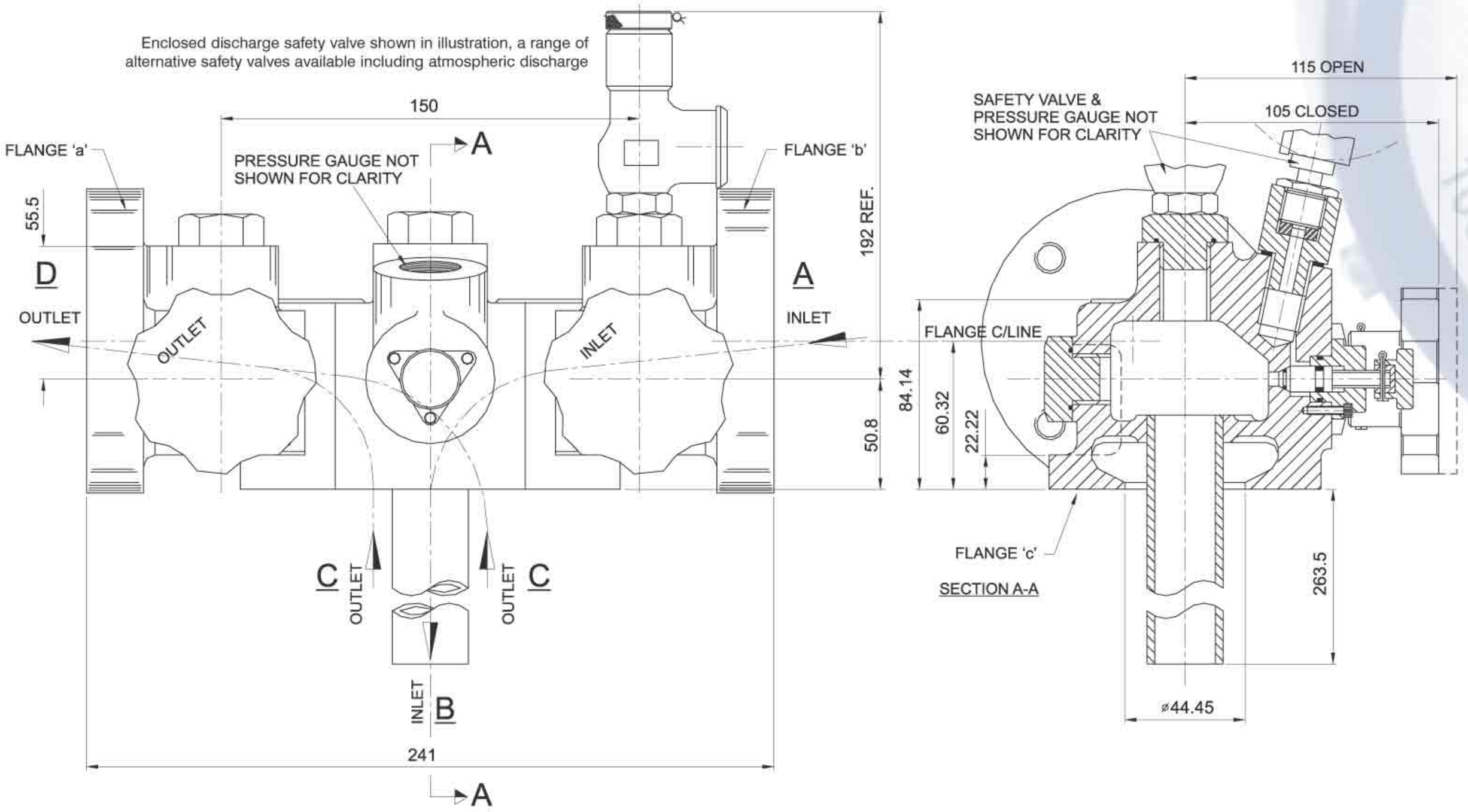
*Pressure Equipment Directive
Compliant with the requirements of the European Pressure Equipment Directive (PED) 97/23/EC and CE Marked from 30th May 2002.

Specification

Air inlet and outlet connections	DIN or BS flange sizes or adapted to pipe fittings
Receiver connection	DIN or BS flange sizes
Materials of construction	Cast body in SG iron, brass and stainless steel internal parts Other body materials, e.g. gunmetal or aluminium bronze available on request
Seal material	Nitrile
Pressure range	Up to 600 psi g.
Temperature range	Up to 110°C

Recommended Spares
1. Fusible plug (**V1210551**)
2. Seal spares kit for complete overhaul (**V1510045**)
3. Replacement inlet or outlet (dual purpose) plunger sub-assembly (**V1510013**)
4. Safety valve (**specify type and set pressure, contact Seetru for information**)
5. Pressure gauge (**specify maximum pressure for red line marking**)

Operation and Dimensions



Operation

The valve unit controls a two-stage operation.

1. The flow of air from the main air supply to an air receiver
2. The flow of air from the air receiver to the engine

For stage 1

1. The "Outlet" valve is closed
2. The "Inlet" valve is opened
3. Air enters the valve through port A and exits though port B into a down pipe in the air receiver, so that any oil or water collects at the bottom of the receiver vessel.
4. The pressure levels in the air receiver can be monitored on the pressure gauge.
5. Once the air receiver reaches the required pressure the "Inlet" valve is closed

For stage 2

1. The "Outlet" valve is opened
2. Clean air from the top of the air receiver immediately flows from port C to port D and to the engine in order to turn over the engine and start it.
3. The pressure levels in the air receiver can be monitored on the pressure gauge.
4. Once the engine has started the "Outlet" valve is closed.

FLANGE SIZES TO BS10 1¼" TABLE 'R'			
FLANGE	'a'	'b'	'c'
DIAMETER	133 (5¼")		
PCD OF 4 HOLES	98 (3.875")		
HOLE SIZE	$^{5}/_{8}$" – 11 UNC–2B		Ø 18 ($^{23}/_{32}$")

EN1092-2:1997/DN32/PN40*			
FLANGE	'a'	'b'	'c'
DIAMETER	133 (5¼")		
PCD OF 4 HOLES	100 ($3^{15}/_{16}$")		
HOLE SIZE	M16		Ø 18

*SUPERSEDES BS4504-PN40-DN32

Installation and maintenance instructions available from Seetru

Seetru also supply a range of related products, including:

- Air start valves
- Safety and relief valves
- Regulator valves
- Other ancillary valves
- Circular window sight glasses
- Liquid level gauges and indicators
- Fusible plugs

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EDITION A