

Routine **Hydrostatic Pressure Testing** is a mandatory requirement for all engineering goods that contain pressure. Usually the hydrostatic testing either validates “**Proof Pressure**” (1.5 times maximum working pressure) or it could be a simple “**Leak Test**” (1.1 times the max working pressure). Such tests basically involves first filling the item with water using a simple pre-fill pump, and then using a pressure pump for pressurizing it by injecting additional water under pressure (approx 1/3 of 1% of static volume, for every 1000 psi).

For infrastructural projects, especially in Petrochemical or Oil & Gas industry, this involves testing of pipelines, pressure vessels, petroleum or chemical storage tanks, boilers, large valves, BOPs, X Mas Trees etc, all of which can have either a sensibly small static volume with high pressure, or more often than not, large volume in excess of a lakh ltrs with proportionately lower pressure !!! Due to the large variation in volume and pressure, no one equipment is capable of doing the entire range of testing requirements. Hence, it is common practice to have a range of such equipment to cater to the specific requirements of the project. We can provide custom made indigenous models of Pressure Packs, with instrumentation and controls, choice of 140 odd models of air driven or motor driven pumps from world class API/NACE/ATEX approved OEMs, which can handle pressure range from 10 to 10,000 bar !! Please consult us for optimal pump solutions.

Due to the nature of the media (water), nuances of On & Offshore project sites (mostly class I area), light weight, ease of operation and transportability, the most preferred pump option for hydrostatic testing are those which are Compressed Air Driven (with around 5 to 6 b pressure). For details of how they work, please see our detailed pump catalogues. Compared to electrical pumps, these air driven pumps do not spark, can hold pressure indefinitely without consuming energy, will kick in instantaneously when there is pressure loss, can be automated easily to stall at preset pressure, and can be controlled / instrumented using simple mechanical devices. The advantages outweigh the disadvantages. We also provide immediate product and maintenance support for equipment supplied by us.

The above mentioned pressure packs can also be used for driving ‘Pigs’ down pipeline sections.

# HYDROSTATIC PRESSURE TESTING

## OIL & GAS + PETROCHEMICAL INDUSTRY

### Twin Pump Pressure Packs

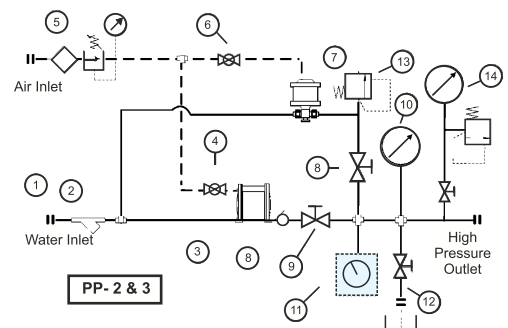
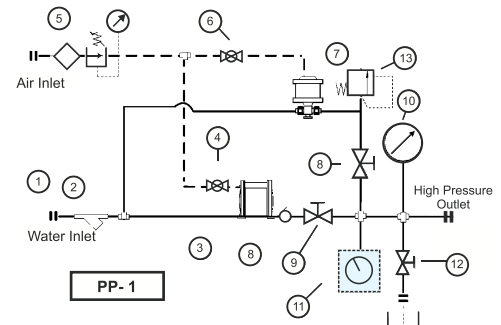
(for testing items with large static volume)

The Twin Pump Pressure Pack models basically comprise the following **Pre-fill Pump**. A rugged air driven low pressure pre-fill diaphragm pump with static flow rate varying from 20 lpm to 300 lpm. Pumps to be optimally sized as per customer requirements from branded pumps that are common in the O&G and Petrochemical industry.

**High Pressure Pump**. A high powered rugged high pressure pump, rated from 10 to 10,000 b, static flow 0.8 to 150 cc/min. Pumps to be optimally sized as per customer requirements from 140 odd models of Haskel USA pumps.

### System Controls & Packaging

- Air filter, regulator and gauge, one set of individual on/off cycling speed control valve on the air line.
- Filter and drain control (Y strainer) on water inlet.
- Check valve, individual outlet control and pressure gauge on high pressure outlet line.
- Vent valve and vent outlet.
- All the above mounted within a 316 SS roll bar frame with sloping control panel and carrying handles, with legend & mimic.
- Optional – Provision for mounting Pressure Relief Valve within the system (customer to specify the pre-set pressure desired).
- Optional – Provision for mounting Chart Recorder within the system (if ordered – customer specific clock timing).



1. Water Inlet
2. Y Strainer with Drain
3. Air Driven Diaphragm pump (for pre-fill)
4. On Off Cycling Speed Control Valve
5. Air Filter Regulator & Gauge
6. On Off Cycling Speed Control Valve
7. Air Driven High Pressure Pump
8. Isolation Valve
9. Isolation Valve
10. 4" dia Pr Gauge with dual graduation (psi & b)
11. Chart Recorder (Optional)
12. Vent Valve
13. Relief Valve (Optional)
14. 4" dia secondary pressure gauge with relief valve to facilitate high and low pressure testing with greater accuracy.

### Other Single Pump Pressure Packs & High Flow Systems

We can also offer you a large variety of simple customized Single High Pressure Pump Pressure Packs (SP-PP) or complex PLC controlled High Flow Pressurizing Systems (HPS). SP-PPs are used for hydrostatic testing of small volume piping accessories or valves, up to 6000 bar. These pressure packs can also do myriad of general automotive applications (lifting, jacking, pulling, pushing, pressurizing, control actuation etc). HPS are used for flushing and other automotive applications including driving of Pigs and activation of subsea valves.

Lastly, we can also offer you electrically driven, or petrol engine driven, high pressure, Triplex, high flow pump systems used for myriad applications in Oil & Gas as well as Petrochemical industry.



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