

# **VISIONAIRE, INC.**

## Hydraulic Compressor Drive Options



### 41-1300 SERIES

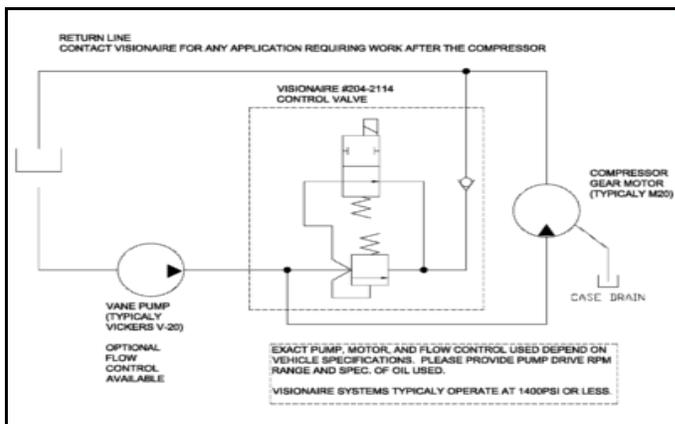
Visionaire hydraulic compressor drives are available in a wide variety of capacities and configurations. Using heavy steel weldments and precision machining where needed these products are extremely rugged in the most difficult environments. While Visionaire offers several standard versions of the 41-1300 (as shown above) OEMs often have specific hydraulic or refrigeration system requirements that require different configurations.

Most 1300 series compressors operate safely in a range of 3 to 13 GPM [11-50 LPM] with optimum flows between 7 and 10 [ 26 and 38 L]. Typical hydraulic system pressures are between 1000 and 2000 PSI [70 and 140 BAR] depending on thermal load.

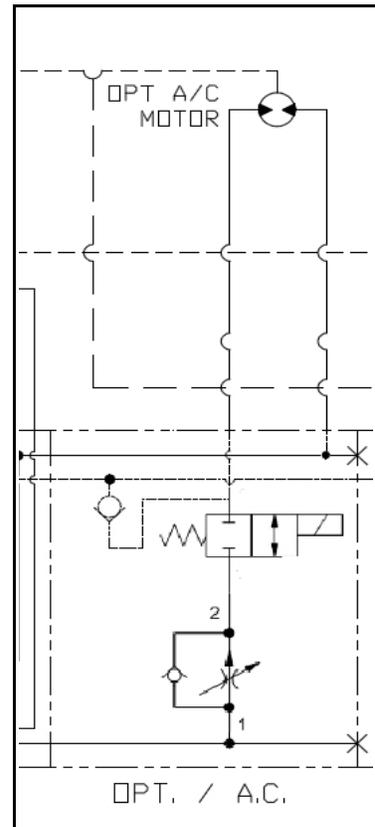
Versions of the 1300 are available with separate solenoid and relief valves to cycle and protect the compressor. We also offer hydraulic motors with these controls built into the motor body itself, to save space. Both of these varieties are made to work with fixed displacement pumps. They allow flow to bypass the motor until the “clutch” wire is energized. When the the solenoid is energized oil is forced through the motor, turning the compressor. If hydraulic pressures become excessive because of a failure in the refrigeration system the hydraulic relief valve will open, allowing the fluid to once again bypass the motor and return to tank.

On the next page you will see a typical hydraulic schematic for one of the systems described above.

Load sense and constant pressure hydraulic systems require different controls. It is generally best to have the compressor drive operate at or near the pressure of other accessories on the vehicle. This reduces the heat load imposed on the oil by the flow control and makes compressor speed control more accurate. We use alternate motor displacements to match compressor requirements to system pressures.



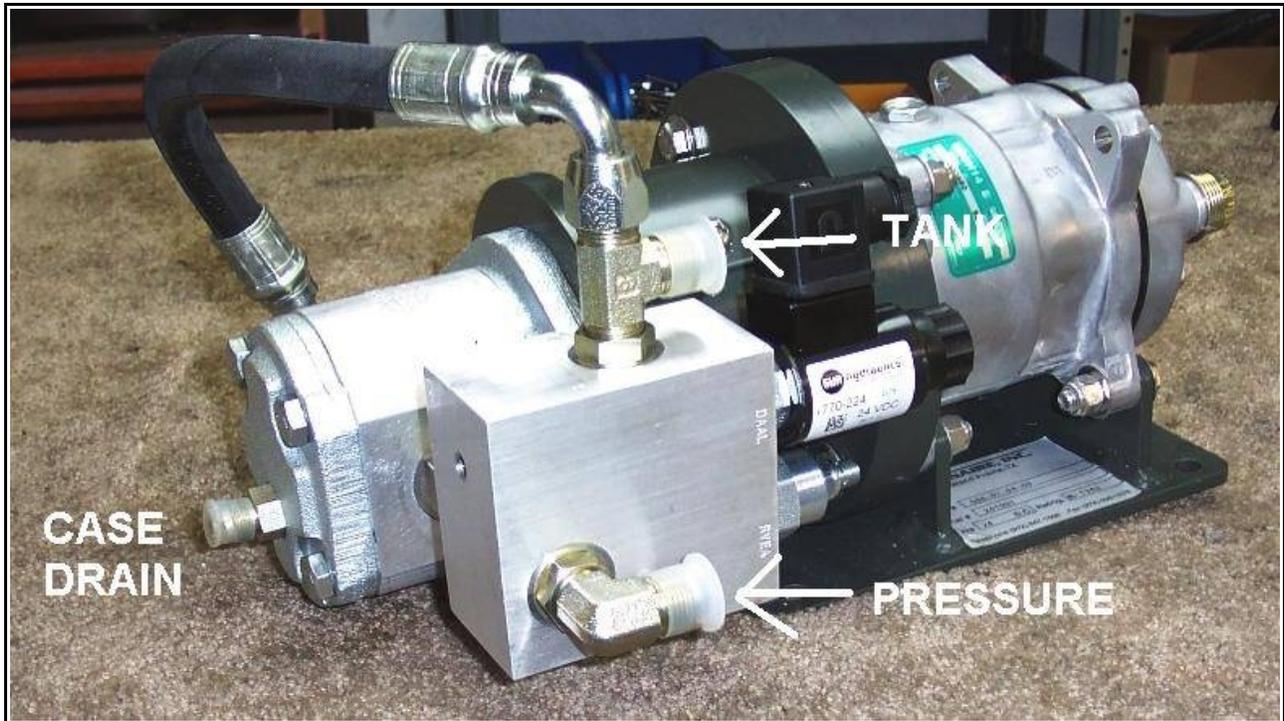
TYPICAL FIXED DISPLACEMENT CIRCUIT



TYPICAL LOAD SENSE CIRCUIT

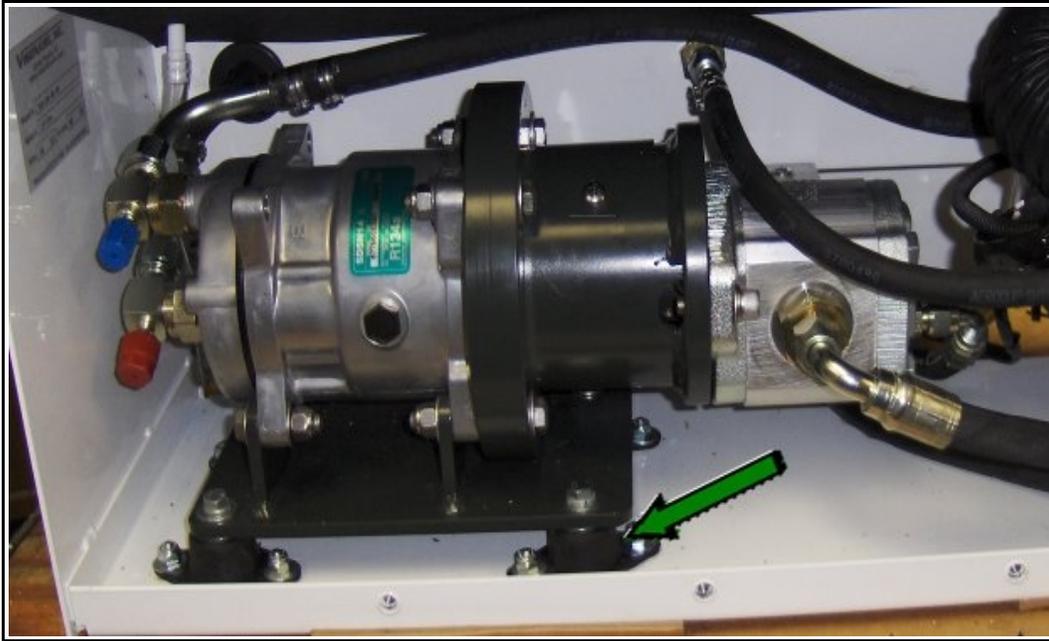
Contact Visionaire for guidance specifying and connecting your compressor drive.

Modifications to a vehicle's hydraulic system can cause dangerous conditions to occur. Working on a hydraulic system can be hazardous to the worker and those nearby. Any modifications made to an existing system should be done with consultation of the vehicle manufacturer. Visionaire hydraulic systems are never designed for over the road use on public highways.



41-1310

This model 1310 compressor has the controls attached for easy installation. The case drain line should be directed straight back to tank, only connected to other 0 PSI / 0 BAR lines. Though we use quality high pressure Viton shaft seals you will find that using a case drain on this application will greatly prolong seal and motor life.



HEAVY DUTY FAIL SAFE VIBRATION MOUNT

By their nature hydraulic systems generate vibrations that can turn into unpleasant noise in the cabin. If the compressor drive is to be mounted away from the cabin it may be mounted directly to the vehicle's frame. If mounted near, on, or in the cabin some form of isolation and sound damping will be required. The compressor itself is not surprisingly loud so long as recommended flow rates are observed. Vibration becomes sound when it is transmitted to the flat surfaces of the cabin wall. Vibrations are also carried by all hydraulic hoses and fittings. Visionaire vibration damping pads and fail-safe mounts used in conjunction with properly secured and isolated plumbing will greatly reduce noise levels.



AN OEM APPLICATION FEATURING A TM-21 COMPRESSOR MATED WITH A HIGH PRESSURE MOTOR  
USES LARGE VIBRATION ISOLATORS