

SPU

Oil Supply Pumping Units



Features

- Pre-engineered for optimum performance
- Skid mounted and prepped
- Double basket inlet strainer
- Direct mounted TEFC C-flange motors
- Wear resistant pump internals for heavy/recycled oils
- Field adjustable oil discharge pressure
- Light and heavy/recycled oil versions available

Benefits

- Easy field installation
- Long service life
- Change strainers for cleaning without shutting down oil supply flow
- Elimination of pump/motor alignment issues via direct connected pump
- Maintains constant oil supply pressure via field adjustable pressure control



Hauck SPU Supply Pumping Units provide efficient, dependable delivery of fuel oil to furnaces, kilns, ovens, dryers, boilers, etc. Presized and completely assembled on a skid, the SPU units are ready for connection to on-site fuel supply and electrical power. Available in multiple sizes for light oil and for heavy/recycled oil to meet the requirements for most applications. Consult Hauck for special design supply pumping units including different flow capacities or dual pumps for enhanced oil supply system reliability.

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Combustion Excellence Since 1888

SPU

OIL SUPPLY PUMPING UNITS



ADVANTAGES OF THE SPU

Pre-Engineered for Optimum Performance

Easy Field Installation

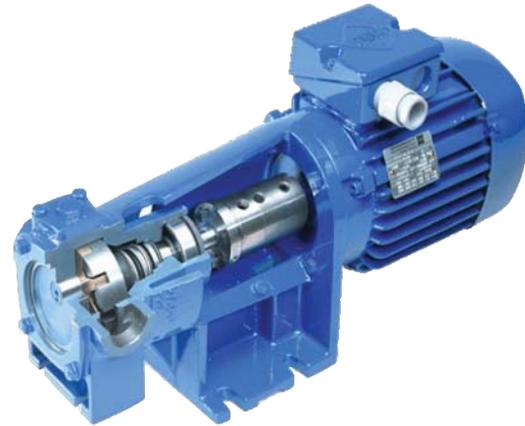
Long Service Life on Light and Heavy/Recycled Oils

Hauck SPU oil supply pumping units provide efficient, dependable delivery of fuel oil to furnaces, kilns, ovens, dryers, boilers, etc. Standard components are used to design an SPU system to each customer's exact requirements. All components are presized and selected for optimum performance. Possible problems (such as pump cavitation, excessive pressure drops, friction losses, etc.) resulting from mismatching or incorrect rating are avoided. SPU systems minimize startup and operating difficulties and reduce maintenance costs. Each unit is shipped completely assembled on a skid and interconnected with properly sized piping, fittings and required hardware, ready for connection to the on-site fuel supply and electrical power.

Construction

Each SPU incorporates design simplicity and common components. Standard SPUs utilize a manual ball valve at the oil supply inlet to enable insulation for component maintenance. A double basket strainer contains stainless steel baskets with 1/16" (1.6 mm) openings to trap dirt and other foreign material present in the fuel oil to avoid clogging of downstream components such as pumps, control valves and burner nozzles. Fuel oil flow can be switched from one basket to the other to provide for uninterrupted fuel flow during cleaning of the idle basket.

A flexible hose is located at the inlet to the pump to accommodate piping expansion/contraction that occurs during various operating conditions. Each pump assembly consists of a TEFC C-flange motor that is direct mounted to the gear pump to eliminate alignment issues prevalent in coupled pump/motor units. Two specific pump designs are available for light oil and heavy/recycled oil. For the latter case, wear resistant pump internals and slower pump speeds are utilized to extend service life for the abrasive oil environment.



Typical Gear Pump Cutaway

A pressure relief valve, located in the return oil line, can be field adjusted to maintain the required oil supply pressure for the specific application. A check valve is located in the return oil line to prevent the unwanted reverse flow of oil. The SPU is mounted on a pan which will contain any oil leakage during operation or maintenance and prevent the unwanted discharge into the environment.

Operation

A characteristic of each pump is the required net positive suction head (NPSH). This is the maximum amount of suction pressure (in absolute pressure) that the pump can develop without cavitation to lift the oil out of the tank and overcome pressure losses in the supply piping to the pump. The NPSH, also termed suction lift, varies based on pump design/size and fluid viscosity. However, for SPUs pumping fuel oil in the typical viscosity range from 40 to 2000 SSU (4.6×10^{-6} to 4.3×10^{-4} m²/sec), the maximum value for priming SPU pumps is 7.2 psi (50 kPa) and when operating SPU pumps is 11.6 psi (80 kPa). To avoid issues that can occur with supply piping, Hauck recommends the use of sufficiently sized inlet piping and a flooded suction line.

Selection

For Hauck asphalt burner applications, contact Hauck for the correct SPU that has been presized for each specific burner model. For other applications, determine the 1) type of fuel oil, 2) actual pumping viscosity, and 3) required discharge pressure prior to consulting Hauck for assistance in selection of the proper SPU.

For applications where the standard catalogued SPUs will not meet specific requirements, consult Hauck concerning specially designed SPUs, e.g., different flow capacities or dual pumps for enhanced oil supply reliability.