

HYDRAULIC FILTRATION UNIT

Introduction

The Northside Industries (NSI) Hydraulic Filtration Unit (HFU) addresses the environmental and cost impacts of storing and filtering oil during machine maintenance. Hydraulic systems are contaminated from four primary sources: contaminated/poorly processed new oil, existing system debris, external new debris entering the system and particles produced from wear. Not managing these contaminants can lead to premature wear and catastrophic machine failure. During maintenance, hydraulic oil is frequently required to be removed from machines and due to lack of suitable storage or uncertainty over its remaining life, is often disposed unnecessarily.



Hydraulic Filtration Unit (HFU)



The NSI HFU employs a 3hp motor controlled by a variable frequency drive (VFD) and a 1.55 cubic inch displacement gear pump to draw hydraulic oil from equipment into a specially constructed steel, double wall tank where it can be held and circulated through both magnetic and porous filters. Once ready, the oil can be close end fed back to the machine in a cleaned and ready to use state. With the additional option to kidney loop filter the machine tank directly, the HFU offers a simple and effective way to extend hydraulic oil life, reduce downtime and costs by operating autonomously during other scheduled maintenance.

The VFD will automatically control the flowrate of the hydraulic oil depending on its viscosity to ensure maximum possible flow is achieved whilst minimizing wear and energy consumption. The VFD will also detect if either the machine tank or HFU has been emptied and automatically shut off the pump to prevent dry running, requiring minimal oversight during operation.

Technical Information:

Voltage: 600V AC 3 phase
Primary Tank Volume: 2,900L (766 USG)
Dry weight: 1455kg (3200lbs)
Operating Temperature Range: 0°C – 40°C (30-104°F)
Flow rate: 34-95 LPM (9-25 GPM) (MobilTrans AST-30, temp. dependent)
External tank dimensions; Height – 1705mm (67.125") (reference)
Width – 2060mm (81")
Depth – 1570mm (61.75")

Options: Particle counter, digital electronic valve control, leak detection alarms and more.

