

MH Series Hydrapak®

All-in-One Hydraulic Drive
Conditioning System



Experience Proven Results™

MH Series Hydrapak®

All in One Compact Design

What is a Hydrapak®?

The Hydrapak® is a pre-engineered, compact, lightweight, highly efficient hydraulic oil conditioning system. The Hydrapak® incorporates all the necessary components of a properly designed hydraulic system into one pre-assembled unit. The MH Series Hydrapak® includes:

- A small oil reservoir for *maximum space and weight savings*
- Highly efficient oil cooler for *longer component life*
- Return line filter, hydraulically driven fan, and system relief valve

The Hydrapak® establishes the standard for mobile hydraulic cooling systems. The Hydrapak® helps to make specifying, purchasing and maintaining any hydraulic system *quick, easy, and inexpensive*.

- Flow rate to 60 gpm
- Pressure rated to 3500 psi
- Stainless steel construction
- Environmentally friendly

Features

- Heavy-duty stainless steel mainframe for *durability and long life*
- 2, 4 or 4.4 gallon oil reservoir with integral diffuser, which eliminates foaming and vortexing for *increased hydraulic component life*
- High efficiency, heavy-duty oil cooler, designed to withstand vibration/road shock/torsional and thermal stress for *maximum reliability*
- Factory set hydraulic motor driven fan for *optimum performance and maximum cooling efficiency*
- Anodized aluminum manifold block, designed to protect the system from over-pressurization, while providing return line filtration
 - The multi-ported design reduces hoses, fittings and external connections
- Oil cooler bypass valve, protecting the oil cooler against over pressurization and regulating hydraulic oil temperatures for *reliable operation*
- Warranty: 12 months from installation, 18 months from shipment date

The Manifold Block Incorporates

- **Relief Valve** – dirt tolerant, rapid response valve delivers a relief in emergency situations
- **Flow Control Valve** – delivers uniform flow to the fan motor for maximum air-cooling efficiency
- **Filter Bypass Valve** – protects the filter against over pressurization caused by cold oil or a blocked element
 - This valve is incorporated into the control block, eliminating expensive filter/check valve combination filters
- **Micronic Filter** – standard spin-on design with B₁₇ = 75 element, for longer hydraulic component life



A Perfect Fit for Your Application

MH1

The MH1 Hydrapak® is the *smallest and lightest* in the Gardner Denver Hydrapak product range with a flow up to 20 gpm.

- Provides a *cost-effective* system for driving low horsepower product transfer pumps
- Ideal on bobtail delivery trucks for propane, fuel oil, bulk oil, and milk

MH3/MH3T (Tankless)

The compact MH3 Hydrapak® is capable of hydraulic flow up to 40 gpm. The MH3T Hydrapak® does not include a reservoir and is designed for hydraulic systems that require cooling as well as increased volume for stroking cylinders.

- Keeps your oil cool, while providing an *innovative way to reduce the amount of oil* you have on board
- Ideal for an articulated crane, bucket truck, digger derrick, mechanic truck or a specialized piece of mobile equipment

MH5/MH5P (Pressure Compensated)

The MH5/MH5P Hydrapak® is a compact, lightweight and highly efficient hydraulic control module for the operation of *high horsepower and high flow mobile hydraulic drive systems*. It is the *largest* in the Gardner Denver Hydrapak® product range with a flow up to 60 gpm.

- Controls your systems oil temperature and hydraulic pressure
- Provides return line oil filtration, and allows continuous high horsepower operation



Reservoir vs. Hydrapak®



Reservoir

Significantly heavier weight

- Reservoirs are sized according to pump flow and total displaced fluid, typically equal 1½ to 2 times the total pump flow. For example, the reservoir size will usually be 38 to 50 gallons for 25 gpm pump.
- Hydraulic oil weighs 7.3 lbs per gallon. A 50-gallon steel reservoir weighs approximately 157 lbs dry plus 365 lbs of oil. Total wet weight is approximately 522 lbs.

Reduced heat dissipation due to direct sun exposure, poor air circulation and paint color

- Steel reservoirs have natural heat radiating capability. If properly installed with 6" space on the bottom and free air circulation on all sides, a 50-gallon steel reservoir will dissipate only 2 hp with a 70° F differential.

Bulky heavy design requires a lot of space

A frequent need for an auxiliary heat exchanger to help to reduce the reservoir size

A higher potential of large reservoir oil leak resulting in possible fines and clean-up costs

Ideal for systems using large displacement cylinders

Conventional reservoir design



Hydrapak®

Significantly lighter weight without compromise in terms of strength

- The proper Hydrapak® is selected based on the amount of flow the system has and the amount of heat to be rejected from the system
- A Hydrapak® weighs less than ¼ the weight of a standard reservoir. For example, the MH3 weighs just 107 lbs wet, which is less than the 50-gallon reservoir empty!

Removes significantly more heat than the reservoir

- The MH3 Hydrapak® will remove 16 hp with a 80° F differential. Even on the hottest days, the MH Series will keep your hydraulic circuit below the recommended maximum temperature.

Compact design requires less space

All in one compact system

Environmentally friendly, reduces the likelihood of large spill hazards and carbon footprint by utilizing less oil

Ideal for systems using hydraulic motors and/or double acting cylinders. Could be adapted to reservoir systems to reduce the amount of oil required.

Aesthetically pleasing, state-of-an art design complimenting the design culture of today's trucks



Day to day, MH Series Hydrapak® weight-savings provides the operator a substantial benefit in terms of increased payload revenue.

Applications

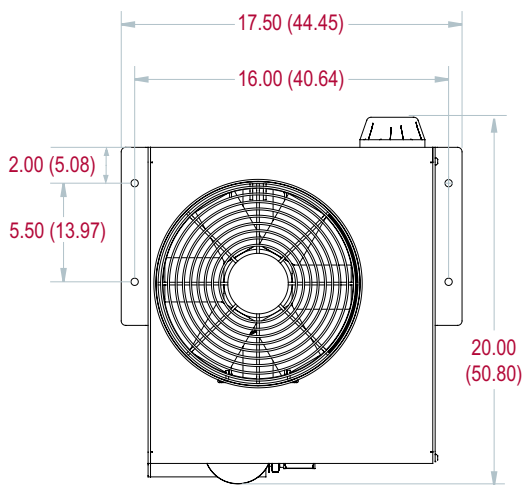
Gardner Denver provides truck builders and operators a variety of installation options

- Lube Trucks
- Hydraulic Tool Circuits
- Cranes
- Compressor Drive Systems
- Generator Drive Systems
- Maintenance Trucks
- Utility Equipment
- Hydraulic Winch Drives
- Crude Oil Transports
- LP Gas Transports
- LP Gas Bobtails
- Food and Chemical Transports
- Bulk Feed Delivery Trucks
- Mining Equipment
- Agriculture Equipment
- Water Trucks
- CO₂ Delivery Trucks
- Vacuum Trucks
- Live Floor Trailers
- Trailer Mounted Pumps
- Multiple Pump or Compressor Drives off 1 power take off
- Bulk Feed Vehicles
- Service Vehicles
- Pneumatic Blowers
- LPG, CO₂, & Cryogenic Pump Drive Systems

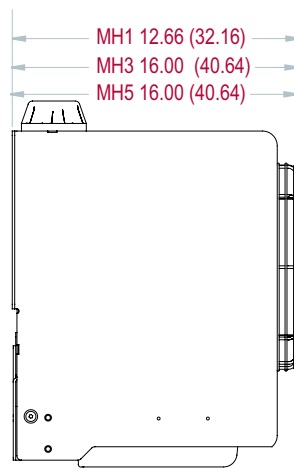


Dimensions & Performance Data

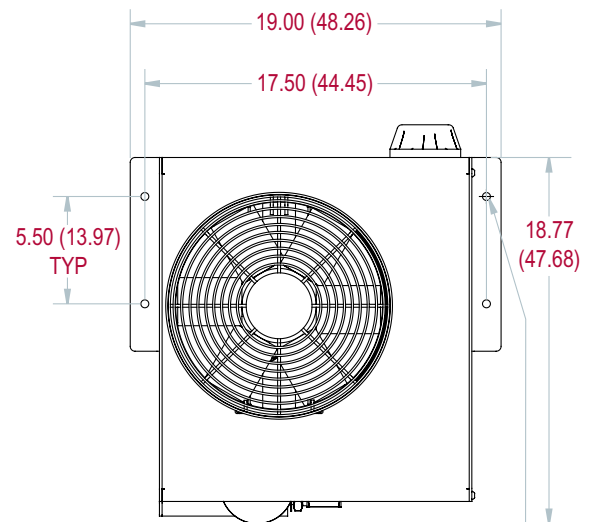
MH1 & MH3



MH1, MH3 & MH5



MH5



* inches (cm)

∅ 0.41 (1.04) PLCS
THRU 4 MTG HOLES





MH1, MH3, MH5 Specifications

| Model | Reservoir | Dry Weight | Flow Rate (up to) | Pressure (up to) | Connections | | | | |
|-------|-------------------|------------|-------------------|-----------------------------|-------------------------|------------------------|-------------------|-------------------|----------------------|
| | Gallons Liters | lbs kg | gpm l/min | psig bar | High Pressure (JICM) | Low Pressure (JICM) | Suction (JICM) | Suction (NPTF) | Suction (Code 61) |
| MH1 | 2 7.5 | 49 22 | 20 76 | 3,000 207 | -12 (3/4") | -12 (3/4") | -20 (1 1/4") | N/A | N/A |
| MH3 | 4 15 | 75 34 | 40 151 | 3,500 ⁽¹⁾ 241 | -12 (3/4") | -16 (1") | N/A | -32 (2") | -24 (1 1/2") |
| MH3T | N/A | 75 34 | 40 151 | 3,500 ⁽¹⁾ 241 | -12 (3/4") | -16 (1") | N/A | N/A | N/A |
| MH5 | 4.4 17 | 94 43 | 60 227 | 3,500 ⁽¹⁾ 241 | -16 (1") | -24 (1 1/2") | N/A | -32 (2") | N/A |
| MH5P | 4.4 17 | 94 43 | 60 227 | 3,500 ⁽¹⁾ 241 | -16 (1") | -24 (1 1/2") | N/A | -32 (2") | N/A |

⁽¹⁾ 5,000 psi (345 bar) option available
Actual performance may vary based on system design, environment, and maintenance.



Parts, Service and a Warranty That Lasts



Customized hydraulic system

Service Commitment

Gardner Denver backs you with total product support from our dedicated distribution network.

Full Warranty

Gardner Denver carries one of the industry's strongest warranties—12 months from date of initial use or 18 months from date of shipment to the first purchaser, whichever occurs first.

Gardner Denver®



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