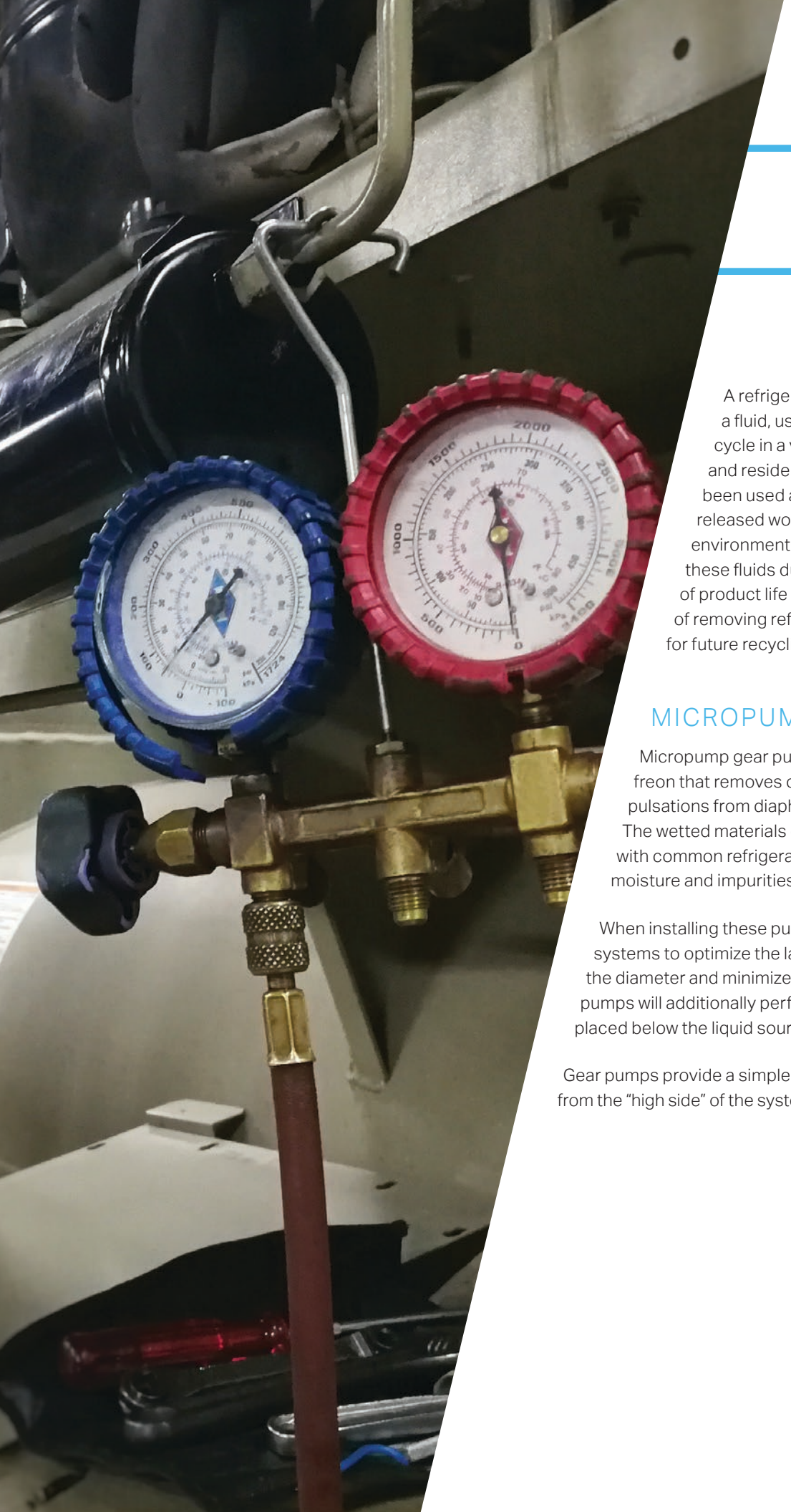
REFRIGERANT RECOVERY

MICROPUMP®



REFRIGERAN

A refrigerant is a substance or mixture, usually a fluid, used in a heat pump or refrigeration cycle in a variety of automotive, commercial and residential applications. Many fluids have been used as refrigerants, and most of them, if released would have a significant impact on the environment. As a consequence the recovery of these fluids during system recharging and at the end of product life is essential. Recovery is the process of removing refrigerant from a system and storing it for future recycling or reclaiming.

MICROPUMP SOLUTION

Micropump gear pumps offer smooth pulseless flow of freon that removes concern of vaporization caused by large pulsations from diaphragm, piston, or centrifugal pumps. The wetted materials of our pumps are well suited for use with common refrigerants and potential acids formed from moisture and impurities.

When installing these pumps, customers can design their systems to optimize the lack of vapor formation by maximizing the diameter and minimize the length of input lines. Micropump pumps will additionally perform more ideally when the pump is placed below the liquid source.

Gear pumps provide a simple solution for removing liquid refrigerant from the “high side” of the system and transferring it to a storage tank.

IT RECOVERY

Flow Rate
- < 20 lb./min (Freon) flow rate
- Variable speed pumps for this application with flows from 0.2 to 20 lb./min

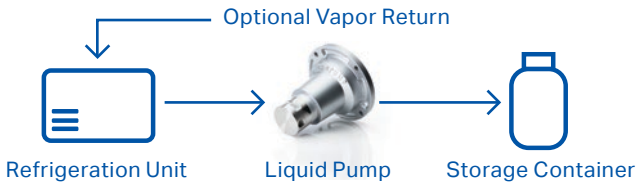
Max System Pressure
- 450 psi (31 bar) max system pressure
- Up to 1500 psi (103 bar) max system pressure

Max Differential Pressure
- 40 psi (2.76 bar) max differential pressure
- Up to 125 psi (8.6 bar) max differential pressure

Chemical Compatibility
- With refrigerant and acids formed from moisture and impurities
- Chemically resistant construction materials stand up to the aggressive fluids found in refrigerants (PEEK, PSS, TEV, 316SS)

Leak Free
- Magnetic drives eliminates dynamic shaft seals, keeping fluid securely inside the pump and potential contaminants out

Maintainability
- Service Kits for easy field serviceability



Gear pump used to recover liquid refrigerant

MICROPUMP PRODUCTS OPTIMIZED FOR THIS APPLICATION

Micropump GD Series and GC Series are most commonly used in this application.

GD Specifications
- Displacement: 3.48 ml/rev (M35)
- Min Flow Rate: 1.7 L/min | 0.46 US gpm
- Flow Rate: 1.74 to 13.9 L/min (27.6 to 221 USG/hr)
- Max Differential Pressure: 100 psi (6.9 Bar)
- Max System Pressure: 1500 psi (103 Bar)
- Temp Range: -46 to 204 °C (-50 to 400 °F)

GC Specifications
- Displacement: 0.811 ml/rev (M23) | 1.82 ml/rev (M25) | 3.48 ml/rev (M35)
- Min Flow Rate: 405 mL/min | 0.11 US gpm
- Max Flow Rate: 0.405 to 13.9L/min (6.4 to 221 USG/hr)
- Max Differential Pressure: 125 psi (8.6 Bar)
- Max System Pressure: 1500 psi (103 Bar)
- Temp range: -46 to 177 °C (-50 to 350 °F)

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