

Frick India Liquid Overfeed System



LIQUID RECIRCULATION PUMP



Frick India Ltd.



P&I DIAGRAM
OVER FEED SY
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OVERFEED SYSTEM

Overfeed systems (recirculation system) are those in which excess liquid is forced, mechanically or by gas pressure, through organized-flow evaporators, separated from the vapour, and returned to the evaporators. This ensures no oil in the evaporators and no liquid slugs in the compressor leading to high saving in power and maintenance.

ADVANTAGES OF LIQUID OVERFEED SYSTEM

Even refrigerant distribution :

The entire surface of the evaporator is wetted to give an **even distribution of the refrigerant** resulting in increased efficiency.

Protection of compressors :

The **compressors are protected from liquid slugs** resulting from fluctuating loads or malfunctioning controls.

Hot gas defrosting :

With simple controls, **evaporators can be hot-gas defrosted** with little disturbance to the system reducing wasted refrigeration.

No effects of fluctuating ambient and condensing conditions :

Refrigerant feed to evaporators are **unaffected by fluctuating ambient and condensing conditions**. The flow control regulators do not need to be adjusted after the initial setting, since the overfeed rates are not generally critical. Ideal for temperature accuracy.

Zero pressure drops in the evaporators / overfeed lines :

Flash gas, resulting from refrigerant throttling losses, is removed at the low-pressure receiver before entering the evaporators. This gas is drawn directly to the compressors and is eliminated as a factor in the design of the system low side. **It does not contribute to increasing the pressure drops in the evaporators or overfeed lines**. This Results in low running time.

Ease of operation :

Refrigerant level controls, level indicators, refrigerant pumps and oil drains are generally located in the equipment rooms, which are under operator surveillance. Overfeed systems have **convenient automatic operations**. Allows all kinds of operations to comfortably operate the system.

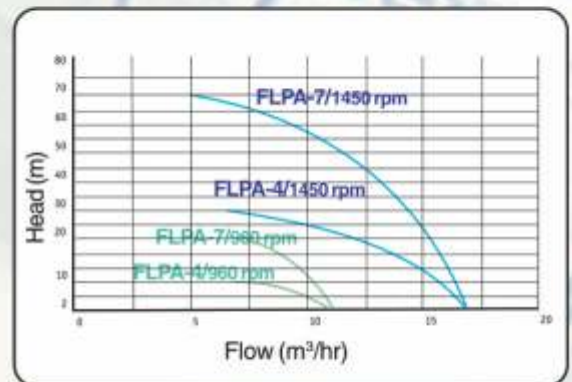
Low maintenance :

Because of ideal entering suction gas conditions, compressors last longer. There is **less maintenance and fewer breakdowns**. The oil circulation rate to the evaporators is reduced as a result of the low compressor discharge superheat.



Plant room view of liquid overfeed system with liquid ammonia pump and low pressure liquid ammonia receiver.

SPECIFICATIONS



Selection based on R-717 with following parameters:

Operating Temperature : -50°C to 10°C
Voltage : 415 volts
Frequency : 50 cycles

Installed power: FOR FLPA-4 - 3.73Kw at 1450rpm & 1.5Kw at 960rpm
Installed power: FOR FLPA-7 - 5.6Kw at 1450rpm & 2.2Kw at 960rpm

Frick India liquid ammonia recirculation pumps are developed keeping in view the rugged Indian atmosphere and operating conditions.

For R-22 & other refrigerants applications please contact the factory.

Controls - optional

All specifications are subject to change without prior notice.

FEATURES

- Rugged graded close-grained cast iron body for cryogenic applications.
- Even balanced special design impeller.
- Open type for easy and low maintenance.
- Graded steel shaft
- Twin seal assembly



Largest manufacturer of high quality modern refrigeration systems under one roof

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