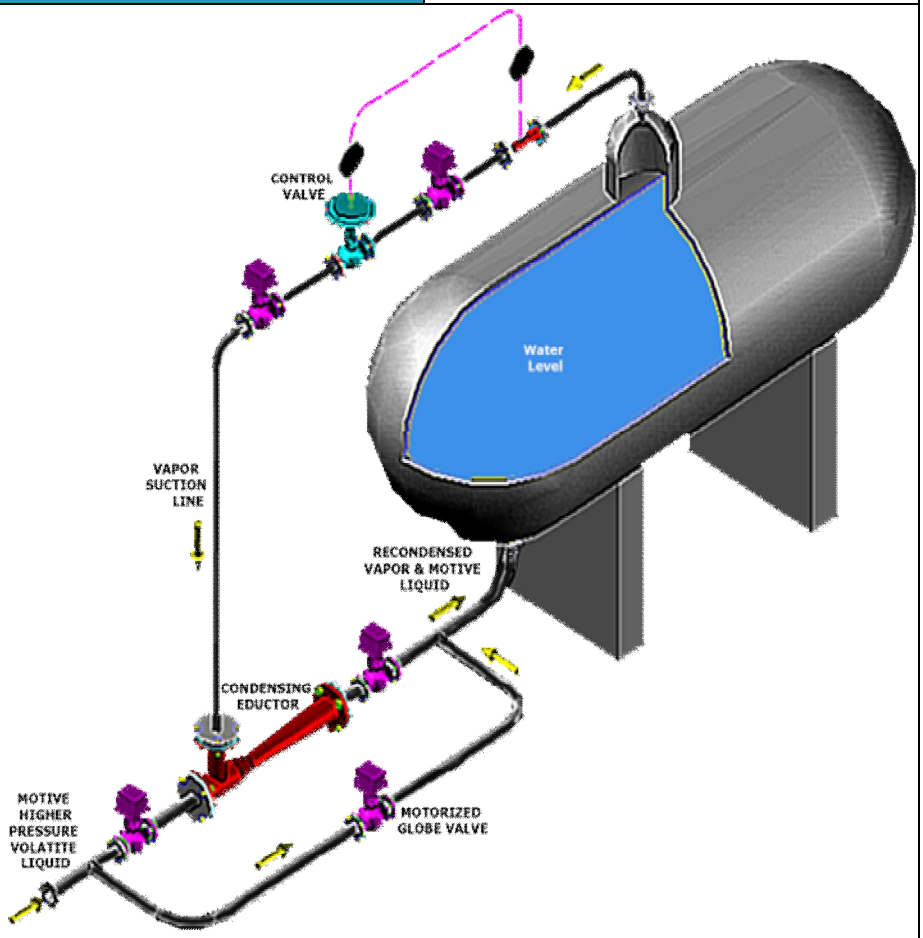
CONDENSING EJECTORS
E1600 Series

PRIMETECH

- **Condensing ejectors** are equipments which adopts an improved method for filling volatile fluids such as liquified hydrocarbons (especially, **LPG**) in the closed containers or tanks so that they can either be stored or transported.
- When a volatile liquid such as **LPG** is admitted into a closed container the volume available for vapor already present in the tank will be reduced progressively as the volatile liquid starts filling up. This phenomena results in compression of the vapor and increases the pressure of the vapor beyond the vapor pressure of the liquid.
- The conventional method to de-pressurize the system is to let this vapour vent into the atmosphere. But this method cannot be applied in case such as LPG where the vapour is combustible, toxic or valuable. Use of ejectors which are also called as eductors is a proven solution for the above problem.



PRINCIPLE OF OPERATION

- **Condensing Ejectors** are usually installed in the liquid supply conduit, preferably downstream from the liquid meter (as shown in the fig) if provided and generally located close to the liquid receiving vessel.
- The suction side of the ejector is connected to the vapor space of the container/cylinder to be filled.
- The volatile liquid is supplied from a source outside of the container at a suitable pressure using a liquid pump or from an elevated or pressurized reservoir as a moving column of liquid.
- Volatile liquid from the reservoir will flow at a substantial velocity from the nozzle causing a reduced pressure (**Vaccum**) in the chamber wherein the vapors produced by partial vaporisation of the volatile liquid are drawn into the low pressure zone of the eductor.
- These vapors gets intimately mixed with the moving column of liquid therewith causing complete direct heat exchange which results in effective condensation of the vapor into the liquid stream .
- The resulting mixture is then introduced into the Storage container/ Cylinder.
- **Condensing Ejector** which is activated by the fresh volatile liquid supplied not only draws in vapor from the vapor space of the Storage container/ Cylinder but also brings about an intimate contact between the vapor and the liquid so that the vapor condenses/dissolves in the liquid and temperature remains uniform through all parts of the liquid mass within the Storage container/ Cylinder
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APPLICATIONS

Condensing Ejectors are used for transportation and filling closed containers with volatile liquids such as liquified hydrocarbons of which propane and butane are examples and other liquified materials of which anhydrous ammonia, vinyl chloride and sulphur dioxide are examples. With the help of these ejectors, **LPG** and **LNG** are filled in the cylinders.

ADVANTAGES

- Loss of Vapor is avoided
- Safe
- Easy to install
- No moving parts involved
- Self Priming
- Simple & reliable
- Easy to maintain
- Low Cost

INDUSTRIES UTILISING CONDENSING EJECTORS

- LPG Production Facility
- LPG Filling Station
- Propylene transportation for Chemical Process Industries
- LPG Transport from LPG carrier Ships
- LNG Filling Station

MATERIAL OF CONSTRUCTION

We offer the following materials as standard:
BODY:

CS ASTM A105/ ASTM A106 GRADE B	A333 GRADE 6
SA516 GRADE 60	A420-WPL6
ASTM A216 GRADE WCB	A350 LF2
LTCS-SA516 GRADE 60	ASTM 352 GRADE LC1

NOZZLE : SS316
Other materials can be provided as per the Customer's requirement

END CONNECTIONS

Flanged to **ANSI B16.5 300#** as a standard. We can also provide other standard end connection as per the requirement of the Customer.

PRIMETECH
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