

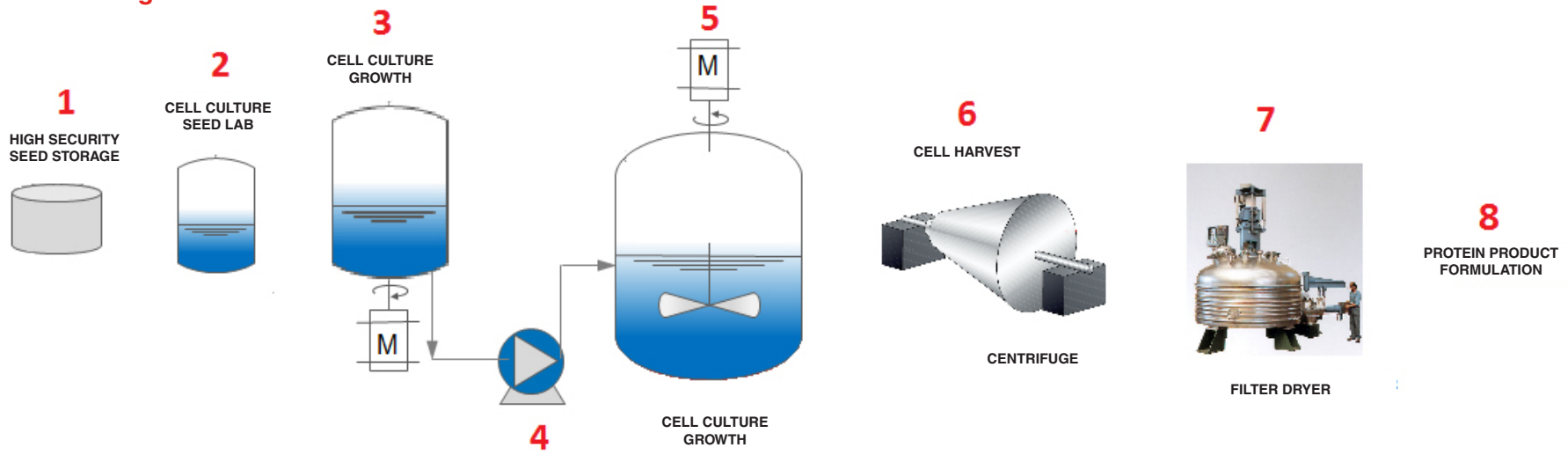
*Process Flow Diagrams*

# PHARMACEUTICAL API PRODUCTION



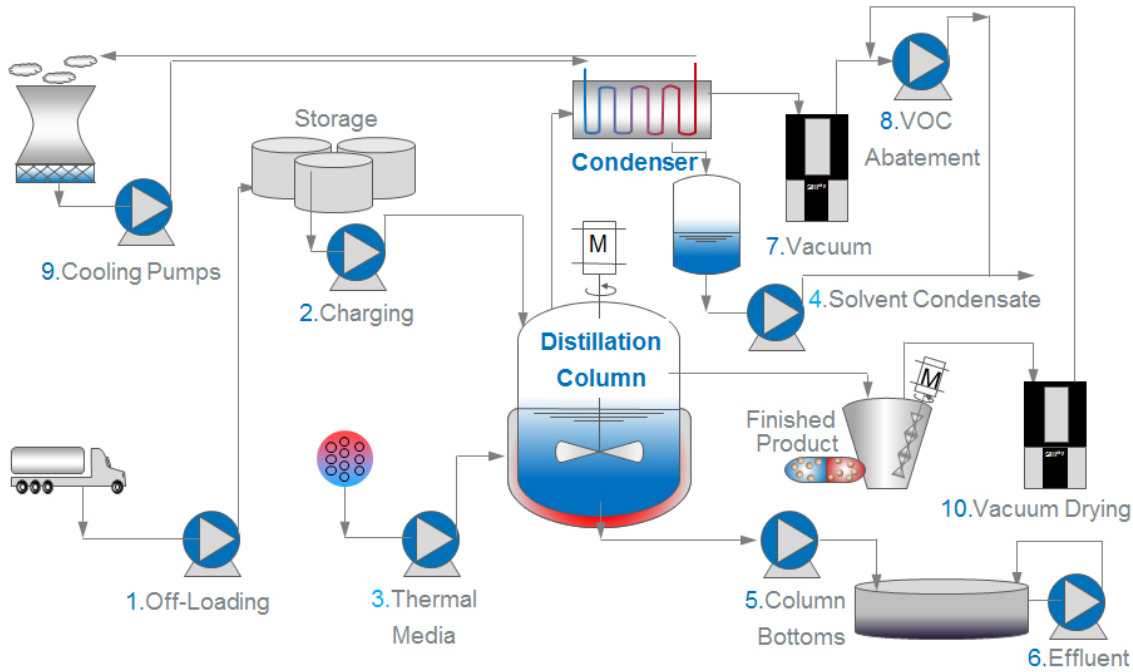
*Experience In Motion*

**Plant Configuration**



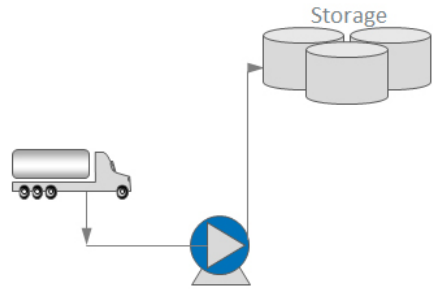
**Plant Configuration**

*Simplified API pharmaceutical plant*

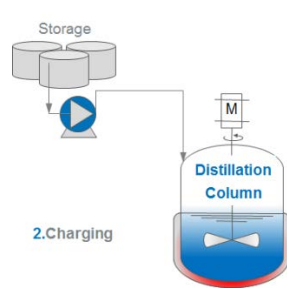


Type of Pumps Used in API Plants

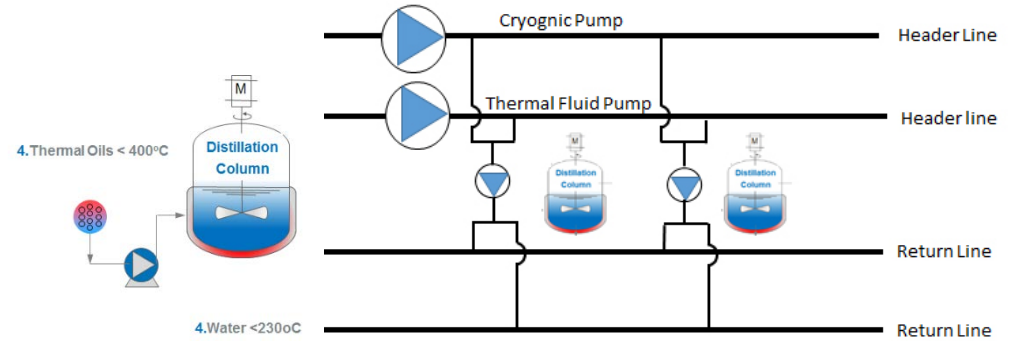
Chemical API Plants



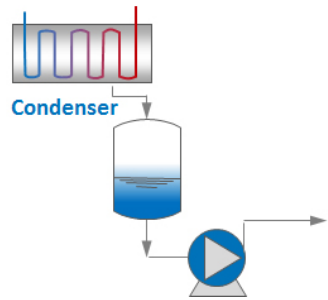
1. Off-Loading Pumps



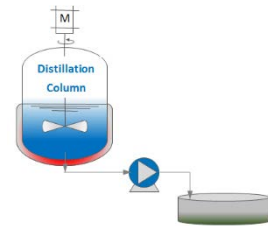
2. Charging or Loading Pumps



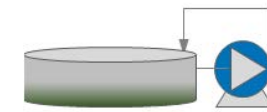
3. Thermal Heating Pumps



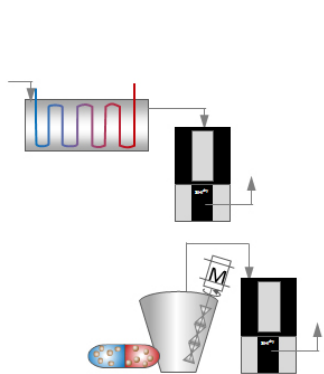
4. Solvent Condensate Recovery



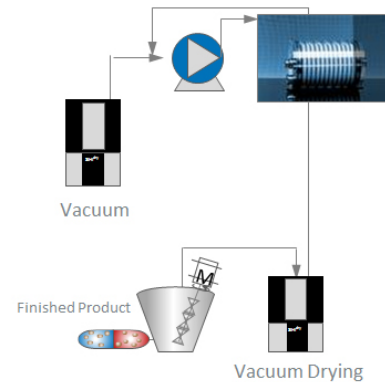
5. Column Bottom Pumps



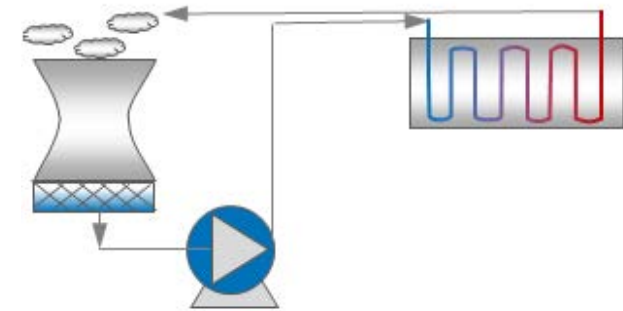
6. Effluent Handling Pumps



7. Vacuum Systems in a Pharmaceutical Plant



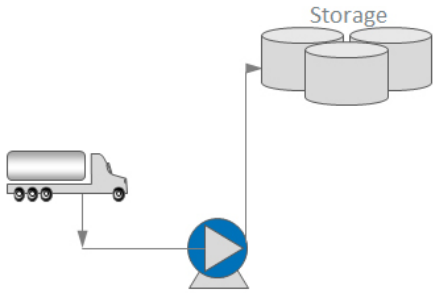
8. Vapor Recovery System



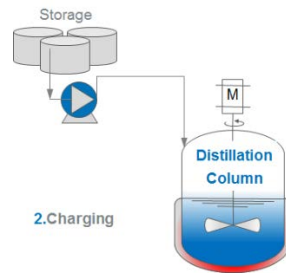
9. Cooling Water Pumps

Type of Pumps Used in API Plants

Biological API Plant

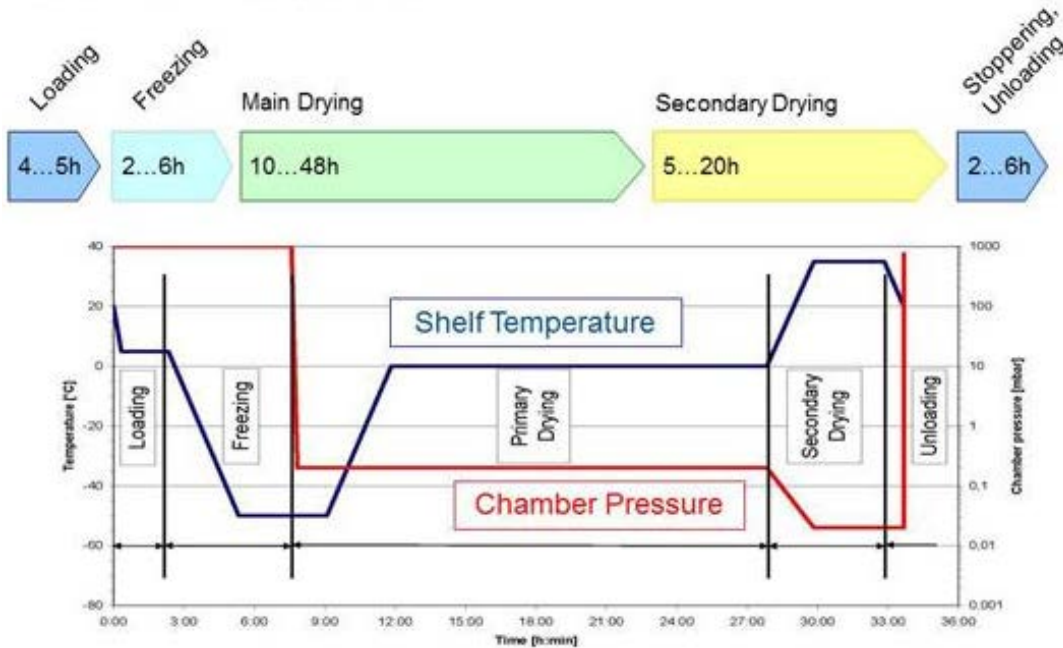


Off-Loading Pumps

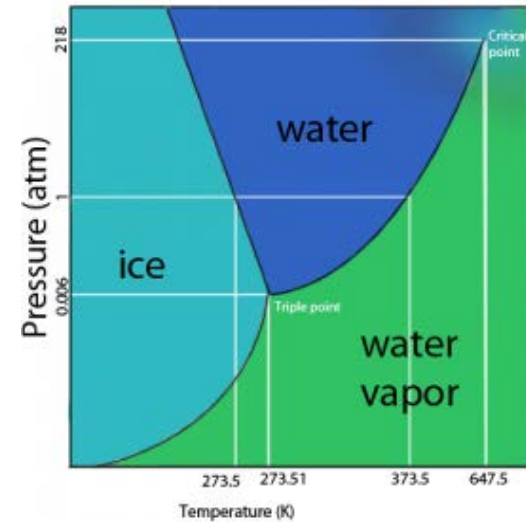


Charging or Loading Pumps

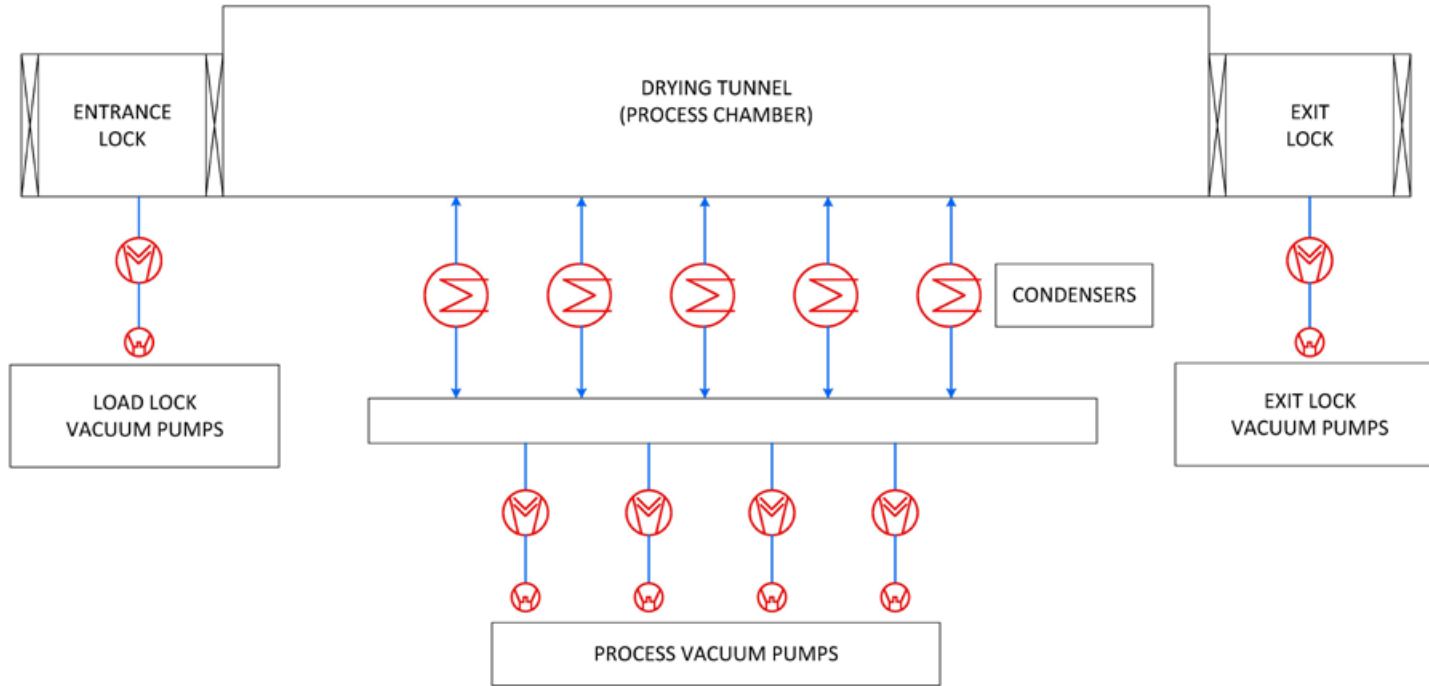
Freeze Drying Process or Lyophilizing



Freezing



Secondary Drying





North America

Latin America

Europe

Middle East

Africa

Asia-Pacific

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***Experience In Motion***

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