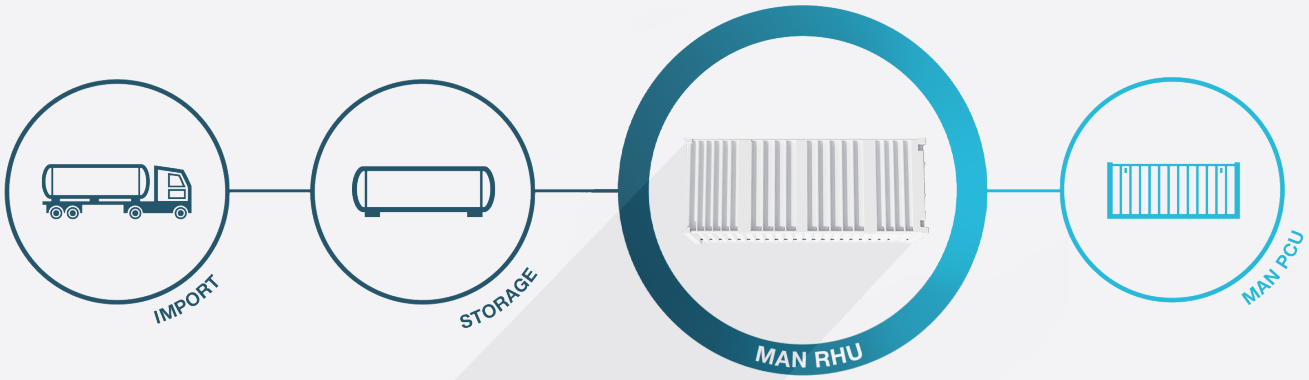
MAN Energy Solutions
Future in the making

MAN regasification system

Liquefied methane (in the form of LBG, SNG or LNG) is delivered at -162 °C. The MAN regasification system converts it back into a usable gas state. The system has the capability to import, store, regasify, and supply gas to consumers. We deliver a complete turnkey solution including all the equipment needed for safe operation and maintenance.

Benefits at a glance

- Modular and scalable design
- Easily customized with add-ons to meet client demands
- Turnkey delivery
- Worldwide service network



Onshore regasification

Operational overview

MAN regasification systems are scalable and can supply gas streams corresponding to over 100 MW in its standard format. The system enables import from trailer/container/railway car, storage, vaporization into a gaseous state, pressure control, temperature control and supervision by the automatic control system.

General competence

We possess the essential cryogenic expertise in engineering, production, and installation within our organization, enabling us to enhance the entire LNG infrastructure according to our clients' requirements. We can assist customers all around the world, starting with feasibility studies and continuing with life cycle cost analysis or a full engineering, procurement, and construction (EPC) turnkey solution for regasification systems.

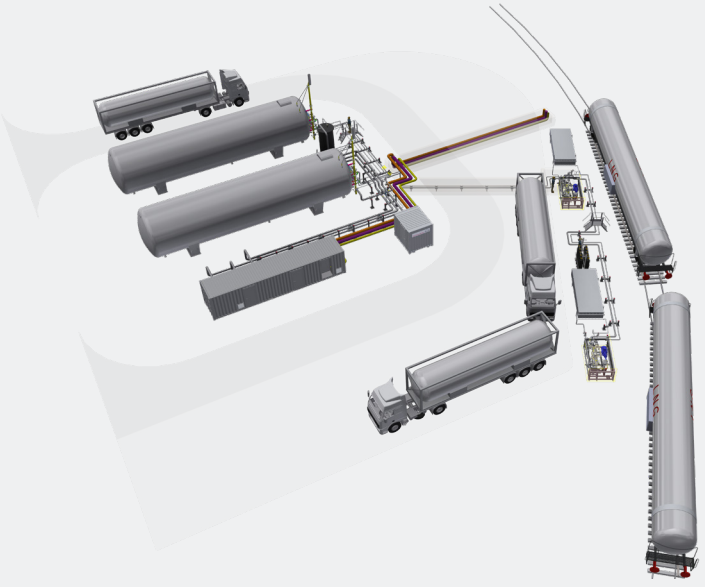
Turnkey supply

MAN Cryo turnkey supply includes design, procurement, on-site installation and commissioning, resulting in a system which is complete and ready to operate.

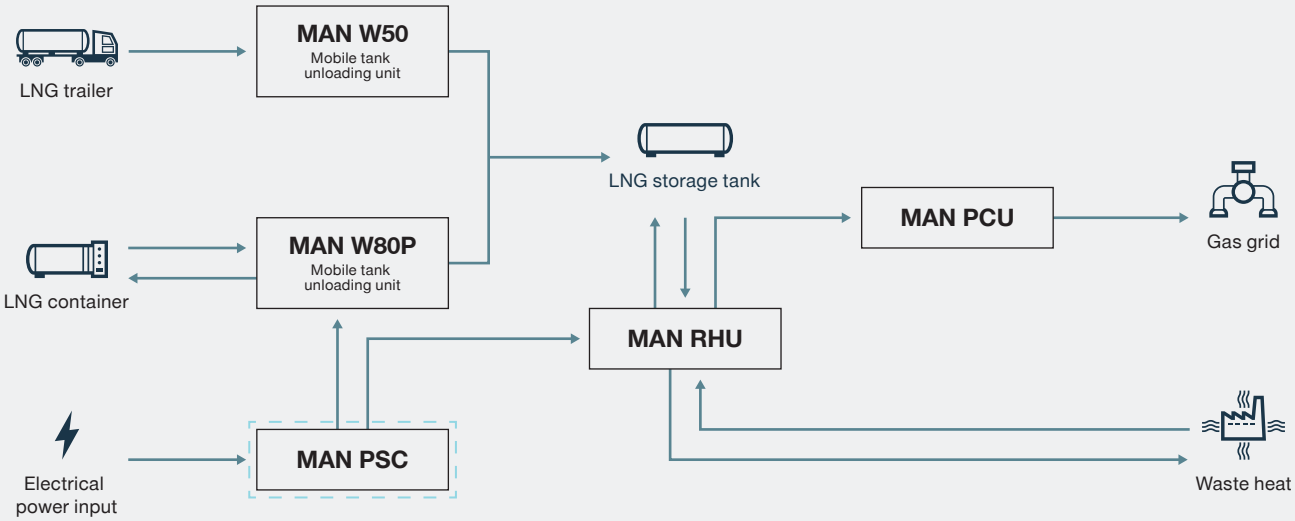
Site-specific design includes the plot plan, layouts, foundation and loads layout, hazardous area layouts, design of interconnecting piping, cable routing, signs, and labelling.

On-site installation includes erection of equipment, installation of interconnecting piping, cable routing, and pre-commissioning activities.

Commissioning includes loop and functional testing, third-party verification of mechanical and electrical safety systems, cool down and test runs with liquified nitrogen (LIN), and first LNG operation.



Typical regasification system with import from trailer and railway car



Key components

The units can either be supplied separately or as a turnkey delivery with installation works, commissioning and performance verification.

- **LNG unloading**
  The MAN W50 or MAN W80P mobile tank unloading units enable safe import of LNG and LBG from mobile tanks (with or without onboard pumps) to stationary tanks at satellite stations.

- **LNG storage tank**
  Vacuum insulated pressurized tanks are used for storage. Volume, orientation, design pressure and other performance factors can be adapted to site and customer requirements.

- **MAN regasification and heat exchanger unit (RHU)**
  A water- or air-heated product vaporizer transforms LNG to superheated gas before pressure control and send-out to consumers.

  Operational pressure of the LNG storage tank is maintained using a water- or air-heated PBU. The pressure is required as driving force for the gas supply.

  A heat exchanger supplies heat to the water-heated vaporizer and PBU. The heating medium used in the system is glycol water. Heat exchange can be from engine cooling water, district heating, steam or another available heat source.

- **MAN pressure control unit (PCU)**
  The gas stream needs to be at the correct pressure, metered for custody transfer and odorized before send-out to consumers. This is done in the pressure control unit.

- **MAN power, safety, and control system (PSC)**
  The LNG system is governed by a stand-alone control system. The control system receives signals from instruments and performs actions depending on which mode of operation is selected.

MAN Energy Solutions Sverige AB
Oljevägen 105
418 78, Goteborg, Sweden
P + 46 (0)31 17 62 95
on-shoresales-cryo@man-es.com
www.man-es.com/mancryo

D2366704 | GKM-AUG-23050