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Notice Regarding Launch of CLifter High-Pressure Gas Cylinder Transport System

The Nippon Sanso Holdings Group's Taiyo Nippon Sanso Corporation ("TNSC," President: Kenji Nagata) hereby announces that it has developed and launched sales of CLifter, a transport system to conserve energy in transporting high-pressure gas cylinders.

1. Background to the Development of CLifter

High-pressure gas cylinders weigh around 50 kg-90 kg and have an unstable form, being long and thin, so work involved in moving or transporting them is hard labor and requires expertise.

TNSC emphasizes initiatives for sustainability toward resolving various social issues and progressed on development of the CLifter transport system aiming to conserve energy in transporting high-pressure gas cylinders as one effort in the TNSC Group's initiatives for materiality(*) including "safety and security," "providing products and services that contribute to solving environmental and social issues," "diversity and inclusion," "improvement of productivity and promotion of production optimization" and "contribution to regional and industrial development as social infrastructure."

* For details regarding the Nippon Sanso Holdings Group's materiality (Nippon Sanso Holdings website): <https://www.nipponsanso-hd.co.jp/en/sustainability/lib/materiality.html>

2. Features of the CLifter

Features of the transport system are as follows.

- Employs an air balancer as an aiding device using compressed air as a driving source.
- Absorbs and lifts high-pressure gas cylinders for transportation by creating a vacuum (reduced pressure) between the cylinder and transporting device.
- Installs in various possible ways, including a hoist trolley or stationary stand, enabling installation matched to conductor wires at filling stations or cylinder storage areas.
- Uses compressed air without electricity for control and operation of the system, eliminating the need for worries such as malfunctions during power failure.
- Contains a safety mechanism that maintains suction and slowly lowers cylinders to the ground even in the unlikely event that compressed air supply is halted.

3. Overview of Specifications

Applicable cylinders	40 liter, 47 liter high-pressure gas cylinders
Transportable (liftable) weight	Up to 100 kg
Utilities	Compressed air 0.5–0.7 MPa 180 NL/min (max.)



Transporting a high-pressure gas cylinder using the CLifter
Easily transport a liquid carbon dioxide cylinder weighing approx. 80 kg (left)
Safely transport flammable gas cylinders as no electricity is used (right)

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