

JETTY

A ROBOT FOR CLEANING AND INSPECTING AIR DUCTS

Are you having difficulties with contaminated air ducts?
Our Jetty cleaning robot is the solution!

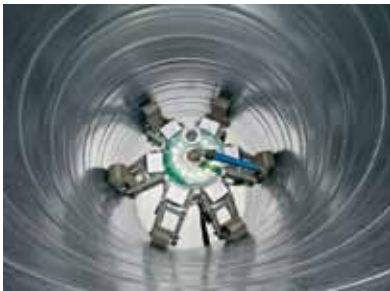


The Jetty Robot

The Jetty robot is a uniquely designed belt robot. It cleans and inspects air-conditioning ducts, kitchen and industrial air vents, air-conditioning vents or any spaces where cleaning is strenuous or impossible without dismantling. The latest generation's design takes advantage of the experience gained from the earlier model. It stands out by virtue of its improved utility, greater resistance, higher efficiency and easier handling.

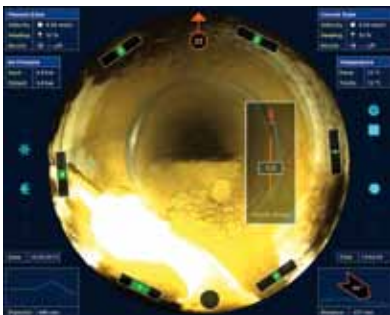
High Efficiency

The robot's construction allows the use of dry ice blast cleaning technology. Using dry ice blasting enables the removal of heavy soiling from ducts ecologically without the application of solvent based technologies. The robot's robust design allows the use of highly efficient nozzles. Thanks to its leg trig, the robot can prop itself against the duct and ensure stability during nozzle rotation and this helps to center the robot in the duct for maximum efficiency. The rotation velocity of the nozzle and the velocity of the robot's locomotion can be adjusted according to the extent of contamination. The cleaning medium is sprayed from the nozzle at -78°C . It quickly supercools the surface and causes so-called thermal shock. As a result, the contamination is released due to the differences in the tension between the contamination and the underlying surface.



Gentle Cleaning

Dry ice blasting cleans surfaces gently and without causing damage. Another advantage of dry ice blasting is the fact that the dry ice treatment (solid carbon dioxide) produces no waste, as the dry ice almost immediately transforms into a gas and leaves the duct through the vent. An indispensable advantage of carbon dioxide is the fact that it is an inert and non-toxic gas.



Duct Shapes

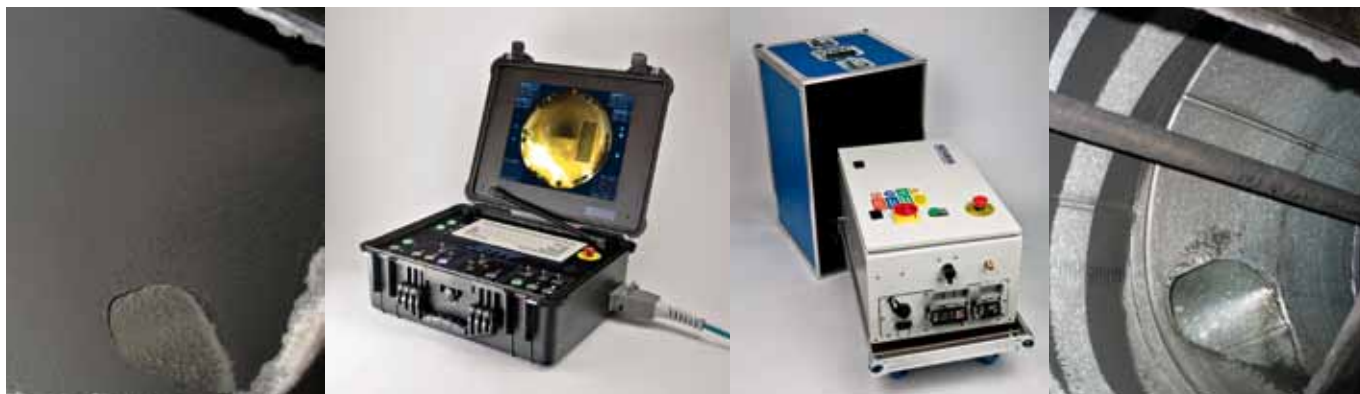
Jetty is able to pass through and clean circular, rectangular or square-shaped ducts and due to its design it can not only be used in horizontal ducting, but it can also pass through vertical or sloping ducting. The robot can also pass through S-shaped ducting and various turns.

Controlling the Robot

The robot has been designed as a modular, easy-to-assemble system. The operator controls the robot from a safe location using a control panel. The duct ahead of the robot is scanned by a camera and the operator can observe it on the monitor. The operator can easily position the robot as needed by manipulating the control panel. Moreover, the operator can directly monitor the duct cleaning process and see the results immediately. The control panel enables video recordings to be saved so the situation before and after cleaning can be assessed and customers can see the difference for themselves.

Ecology

The dry ice blasting method is ecological, because the dry ice is produced by cooling existing carbon dioxide. No new carbon dioxide is released into the atmosphere during its production or use, so it does not cause an increase in the greenhouse effect. The use of solid carbon dioxide makes it possible to clean highly adhesive and resistant sediments without the application of aggressive chemicals based on organic dissolving agents, acids or alkalis.



The duct before cleaning

The control panel

The switchboard

The duct after cleaning

THE JETTY IS A UNIQUE ROBOT WITH AN EXCELLENT ROI AND SIGNIFICANT PROFESSIONAL TECHNOLOGICAL INSIGHT.

WE CAN HELP YOU GET THE DROP ON YOUR COMPETITORS AND INCREASE YOUR EARNINGS.

Technical Parameters

Minimum duct diameter	360 mm
Maximum duct diameter (standard configuration)	710 mm
Maximum duct diameter (with added extensions)*	1300 mm
Maximum locomotion speed	70 mm/s
Robot service weight (excluding the supply hose and cable)	36 kg
Dry ice hose length (max.)	50 m
Switchboard power supply	100–240 VAC
Duct shapes	Circular, rectangular, S-shaped and vertical

* Adjustable according to customer requirements

The robot has been developed by Neovision s.r.o. in cooperation with the Faculty of Electrical Engineering at the Czech Technical University in Prague and it is under patent protection. The robot received a prize in “the Best Cooperation of 2010” contest organized by the American Chamber of Commerce and the Association for Foreign Investment and it has also won a “Special Prize” awarded by the Technology Agency of the Czech Republic. The Jetty robot participated in the competition “Innovation of the year 2011” held by the Association of Innovative Entrepreneurship of the Czech Republic, also won a “Grand Prix” prize awarded by the For Waste & Cleaning Trade Fair Committee in 2011 and won a Gold Medal in the International Engineering Trade Fair in Brno in October 2011.



Gold Medal International Engineering Fair in Brno, 2011
Grand Prix For Waste & Cleaning Trade Fair, 2011
Innovation of the year 2011 held by AIE CR
Special Prize awarded by the Technology Agency, 2010
The Best Cooperation 3rd place, 2010

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The company is registered in the Commercial Register at the Municipal Court of Prague, section C, Entry No. 42536 (VAT-Reg.: CZ64943607).