FIPA Press Release

www.fipa.com

FIPA IN PRACTICE

Gripper system for protective film removal delivers cost- & labor-savings for sheet metal handling

FIPA GmbH (www.fipa.com) recently created a custom EOAT solution that facilitates the removal of protective film from sheet metal with a cost- and labor-saving automated process. Developed for Foilpuller GmbH, a stainless steel sheet metal processing company based in Bobingen, Germany, FIPA's system combines long lifecycle, high holding force vacuum cups with pressure regulating, air-saving compact ejectors to deliver reliable, non-slip sheet metal handling for the Foilpuller system.

Featuring rapid cycle times of 30–45 seconds, the CNC-controlled Foilpuller with FIPA EOAT and vacuum technology automates the film-removal process for metal sheets used in white goods, eliminating tedious manual labor and delivering up to 97% savings in overall operating costs over standard vacuum generators. The patented Foilpuller automates the processing of sheet metal in standard sizes of 1m x 2.5m using FIPA's flat vacuum cups and compact ejectors to apply suction to single pieces of sheet metal in a designated stack at the pick-up site. The vacuum cups prevent wobbling, while a vacuum shuttle delivers the sheet to a worktable where a cutting wheel lightly scores the protective film on the surface of the sheet. Through precisely controlled cutting, the wheel only makes incisions where film needs to be removed to allow for mounting fittings, hinges, cutouts, and welding work, leaving the rest of the protective film intact. A scraper then removes the scored film to reveal a residue-free surface before FIPA's gripper system places the sheet in a second designated stack for further processing.

"The Foilpuller with FIPA's EOAT and vacuum technology has already proven the exceptional reliability of its continuous operation with more than 100,000 successfully processed sheets," said Rainer Mehrer, president of FIPA. "Our engineers worked closely with Foilpuller GmbH to develop the new system, assisting them with everything from the initial consultation, project planning, development, and construction, through to the startup of operations."

FIPA GmbH
Freisinger Straße 30 · 85737 Ismaning / Germany
Phone: +49 89 962489-0 · Fax: + 49 89 962489-11
info@fipa.com · www.fipa.com

FIPA challenge accepted

The SM-F Series flat vacuum cups employed in the Foilpuller feature a flexible sealing lip for optimal, non-slip contact with sheet metal, and are suitable for almost all standard metal surfaces, including flat or textured stainless steel, varnished steel metal, coated plates, and printed film. The series' reinforcement ribs provide a high degree of slip resistance, effectively absorb the high lateral forces that result from maneuvers like tipping metal sheets, and prevent unwanted deep-drawing effects that could warp thin metal sheets. Made of silicone-free NBR materials with a hardness of 60° Shore A, the vacuum cups also feature a vulcanized aluminum connection thread (available in several different options) designed to both minimize leaking and ensure a tight fit, even during dynamic gripping cycles.

The rugged EMA Series compact ejectors combine a pressure regulating, energy-saving function with an electronic air-saving function to achieve outstanding operational efficiency for the Foilpuller. Designed to provide maximum energy savings without limiting the overall performance, the ejectors supply a Venturi nozzle with compressed air to generate a vacuum, allowing the attached vacuum cup to quickly grip the workpiece. A vacuum switch continually monitors the vacuum level to control air savings and triggers the "item gripped" signal at the first vacuum threshold limit (V1, 65%), allowing the scheduled item transfer to take place. When the vacuum reaches the second threshold limit (V2, 75%), the ejector interrupts the compressed air supply to the Venturi nozzle, reducing energy consumption to zero. The vacuum is sustained by a closed, non-return valve and continues to reliably grip the workpiece without any additional energy expenditure until naturally occurring leakage eventually lowers the vacuum threshold back to 65%, at which point the air-saving control cycle briefly generates a new vacuum until the 75% threshold is again achieved. Once the item transfer is completed, the ejector's blow-off valve generates a manually adjustable air jet to quickly release the metal sheet.

About Foilpuller GmbH

Foilpuller GmbH was founded by the owners of Ammer Systemtechnik and Stark Engineering. Combining expertise in the fields of systems engineering and film processing, Foilpuller GmbH provides innovative solutions and advanced stainless steel sheet metal processing. For more information, please visit www.foilpuller.de or booth No. F34/6 in hall 16 during EuroBLECH .

FIPA GmbH
Freisinger Straße 30 · 85737 Ismaning / Germany
Phone: +49 89 962489-0 · Fax: + 49 89 962489-11
info@fipa.com · www.fipa.com

FIPA Press Release

MEDIA CONTACT:

Jennifer Heidbrede
Manager International
Marketing Communication

FIPA GmbH
Freisinger Straße 30
85737 Ismaning / Germany
Tel.: +49 89 962489-0
Mobile: +49 170-7169791
jheidbrede@fipa.com
http://www.fipa.com

More press releases can be found on our website
http://www.fipa.com/de_DE/news/967851-Pressemitteilungen
Reprint free of charge – specimen copy requested

FIPA specializes in vacuum, gripper, and lifting technology. The international company develops and sells high-quality products and innovative system solutions for the material flow sector. FIPA GmbH was founded in 1985, and employs around 70 members of staff at its headquarters in Ismaning, near Munich. FIPA also has an international presence, with its own subsidiaries in the USA and Thailand, and representative offices in Hungary and China. For further information on FIPA, see http://www.fipa.com.