Press Release No. 06.21

New NESTRO® Dedusters NE J - A New Criterion

The development of this new generation of dedusters from NESTRO® Lufttechnik GmbH, Germany, sets a new standard for the industry: This is the first series of dedusters equipped with IE5 reluctance motors and frequency converters. Users can save up to 22% energy costs compared to those using IE3 motors. In this way, the Thuringian company makes a significant contribution to climate protection and at the same time saves the user money.

The development of the mobile NESTRO® dedusters type NE J in the well-established performance classes 200, 250, 300 and 350 for indoor installation is based on decades of company experience in woodworking, in device technology and in the technology of highly efficient fans. The use of our clean air dedusters for the extraction of various materials pays off cost-wise for small and medium-sized companies in many industries. The NE J verifiably saves

- investment costs through installation close to the machine using only short pipeline routes with overall low line resistances
- operating costs thanks to the frequency-controlled IE5 reluctance motor (efficiency above 90%)
- heating costs through circulating air operation without heat loss, because the filter material guarantees a residual dust content of < 0.1 mg/m³ - cleaner than the outdoor air
- maintenance costs through an intelligent, certified automatic fire extinguishing system without the use of water or dry chemicals
- installation and base costs as a mobile plug-and-play device (only power and compressed-air connection plus junction of the pipeline required)

The construction guarantees optimal extraction with the integrated, proven clean gas technology featuring 100% dust tightness and with constant target / actual value comparison of the negative pressure needed by the processing machines. The fan is mounted after the filter unit. The clean gas fan does not transport any material. The new design offers for the user four different disposal options using four alternative substructures, which can also be converted at any time: for dust bin(s), for briquetting presses NBP, for separator locks NZRS or for the 800l norm container common in Switzerland. All mobile bins as well as the feed hoppers for the other three options are equipped with a site glass.

In close cooperation with one of the leading German suppliers of so-called reluctance high-efficiency motors, NESTRO® Lufttechnik GmbH is the first

manufacturer worldwide to offer dedusters with permanently frequency-controlled, quieter IE5 motors as standard. The frequency converter ensures that the motor always runs at the optimal operating point. At the same time, we have optimized the entire fan geometry over several development stages for precisely this kind of motor. The new NE J achieves the lowest energy consumption per power unit, improves reliability and service life and significantly reduces noise emissions. Exhaust air sound insulation using silencers is integrated in the clean gas area. This makes the NE J one of the quietest devices on the market. Optionally, the entire fan room can be additionally soundproofed.

Thanks to a new modular design, the plug-and-play devices are more compact and more flexible to use as the previous version and unbeatable in price/performance ratio. The dedusters can, for example, be delivered in segmented parts for narrow passage-ways to be assembled right on site. They are now also suitable for shipping in standard sea containers. The NE J performance classes 200 up to 350 with an operating volume flow of up to 9,500 m^3/h have proven themselves and cover the range of applications with more than only one processing machine perfectly.

The new generation NE J has an automatic fire extinguishing system starting with performance class 250 certified by the independent fire safety competence centre MPA, Dresden, using a hermetic oxygen seal (fire protection flap). In this way, a fire that arises due to, for example, an ignition source input is immediately suffocated. The blow-in box as an expansion space with a backflow flap offers additional functional reliability. In the case of heat dissipation the fire protection flap is closed pneumatically supported and the fan is turned off. Due to the missing negative pressure the backflow flap also closes, the hermetic oxygen seal is established. This function is also maintained in a zero-potential condition. There is no need to use water or dry chemicals to extinguish the fire – this would destroy the whole device. This also saves the user the mandatory periodic replacement of a powder extinguisher. The need for spark detection and extinguishing is also omitted with all of our standard designs due to the low volume of raw gas.

Like their preceding models the dedusters NE J have a material pre-separation. This means that dust and sawdust do not hit the filter bags directly. The construction design creates a cross flow underneath the filter bags, which prevents dust and sawdust from being swirled up from the bins or the hopper. Cleaning always takes place after the end of operation by means of compressed air pulses, in the so-called JET process. It is known to be quick, thorough and gentle and leads to a longer service life of the filter material. NESTRO® has also included an efficient, high-quality air compressor specifically for this application in its product range - users can get everything from one source.

All dedusters are approved for indoor installation. At the Research Association for Applied System Safety and Occupational Medicine (Forschungsgesellschaft für angewandte Systemsicherheit und Arbeitsmedizin, short FSA), Mannheim, the new series has also passed the mandatory explosion pressure test and is certified accordingly. Thanks to the FSA certified antistatic filter bags made of polyester needle felt, a residual dust content of less than 0.1 mg/m³ is guaranteed. If there is no space indoors the compact device can also be set up outside, e.g. with a return air duct back to the inside. Here NESTRO® offers a summer / winter switch for the regulated supply of fresh air for additional comfort. The construction corresponds to the EU standard DIN EN 16770 for dust and sawdust up to dust explosion class St1.

With the NESTRO®-LOGIC control in 32 languages for the automatic fan start at machine start-up up to 8 processing machines can be recognized and the associated gate valves can be controlled as standard via potential-free contacts or spools. So NESTRO® has an answer to the ongoing trend for more machinery run by the same set of operators. The main control for briquetting press NBP or separator lock NZRS is integrated with the according disposal option in the switchboard cabinet of the deduster – there is only one operating unit for two machines. A wired touch panel terminal with an integrated emergency stop unique within the industry gives the user optimal freedom of movement around the deduster in terms of operation and data analysis. The deduster can be parameterized and operated via the 7“ colour touch panel (switches and indicator lights are no longer necessary). Energy data can be analysed, and commissioning can also take place directly at the processing machines thanks to WLAN. A frequency converter is installed as standard and ensures high energy efficiency at every load level.

The first dedusters of the innovative NE J series are slated to be delivered to customers as soon as Q4 2021.

Founded in 1977, NESTRO® Lufttechnik GmbH is currently one of the large established manufacturers of products and systems for extraction and filter technology and for their downstream heating technology, for surface engineering and for sorting and disposal technology. About 260 employees develop and produce the equipment according to individual customer specifications at the three production sites in Germany, Poland and Hungary.

Images: PM 06.21-1.jpg The criterion for industry: The models in the NE J series are the first dedusters in the world to be equipped with an IE5 motor as standard

If you have any queries about this press release, please contact:
NESTRO® Lufttechnik GmbH, Paulus-Nettelnstroth-Platz, D-07619 Schkölen
Till Uhle, Director Marketing & Director Sales D|A|CH
Telephone: +49 (0)171 3003570 | E-mail: t.uhle@nestro.de