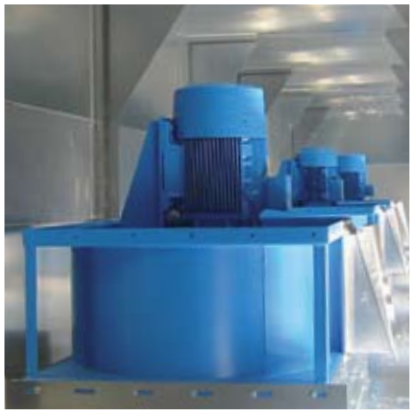


Energy saving Systems

with frequency inverters

less noise
less wear
less energy cost
higher system reliability

HÖCKER® POLYTECHNIK

Always one idea ahead

Energy saving systems

Höcker Polytechnik's programmable control systems reduce the power consumption of pneumatic conveying systems and paint spray exhaust systems by up to 60 %.

Reducing the cost of producing is one of today's most important challenges faced by companies. Innovative control systems with frequency inverters for electric motors can save money by reducing energy consumption.

What should be done?

Production machines are not the main energy guzzlers in many production systems. The real energy guzzlers are HVAC systems and pneumatic conveying systems, in particular exhaust systems. Höcker Polytechnik's control systems with frequency inverters can reduce the actual energy consumptions of exhaust fans by up to 60 %. The frequency inverters were specifically developed for motors of air conveying fans, the drives match the actual volumes of conveyed air to the demanded volumes. This future-oriented technology is becoming standard in new pneumatic conveying systems. But it can also be an advantage to existing systems - control systems can be retro-fitted and then the exhaust systems become energy savers. These retrofits are not restricted to exhaust systems that were originally supplied by Höcker Polytechnik.

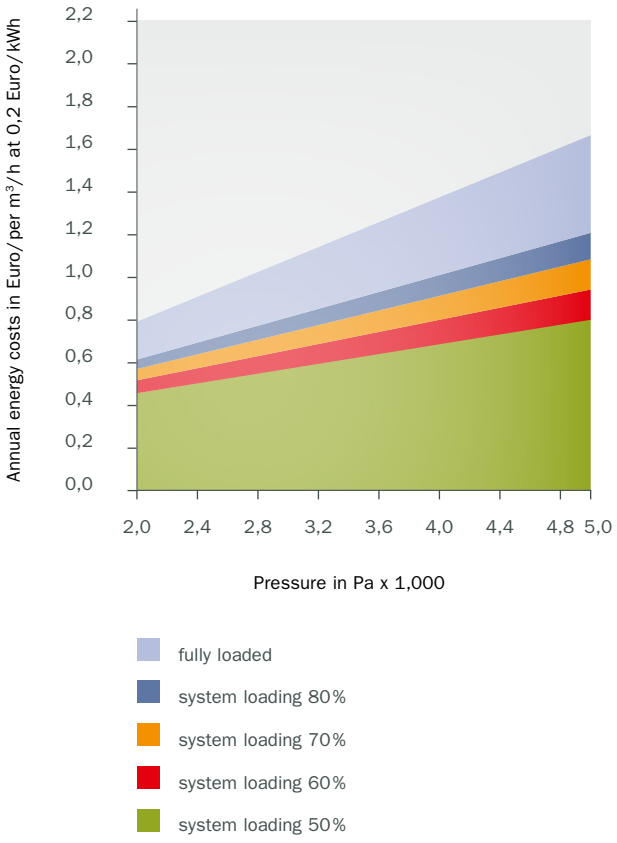
And how does it work?

When one of the production machines is taken off line, the speed of the air conveying fan is reduced to a level where the air flow rate matches the fl ow rate required for a reliable extraction of waste from the machines that remain on line. A minimum fan speed is assigned to each machine, and a lower limit of the pneumatic conveying system is defined where trouble-free pneumatic conveying is still ensured. The programming of the control system is as easy as setting a domestic microwave. Energy savings of approximately 10 % are still achievable even when a pneumatic conveying system operates at full load; a frequency inverter will drive the fan at its optimum operating conditions. This way, an ordinary three-phase motor saves money with each rotation. An inverter will also ensure a quiet and soft start of a fan motor without any current peaks that could cause extra strain on the bearings. An inverter is easy on your wallet, on the motor bearings, and on the ears of your workforce. Our Höcker Polytechnik Service Team can use your data to prepare an energy saving model of your pneumatic conveying system; for large and complex installations a site survey might be necessary. The team will use this model to calculate the potential for energy savings, using software that was specifically developed for this purpose. Most importantly: updating an pneumatic conveying system is extremely cost effective. After a very short payback period, a Höcker Polytechnik control system saves money day after day.

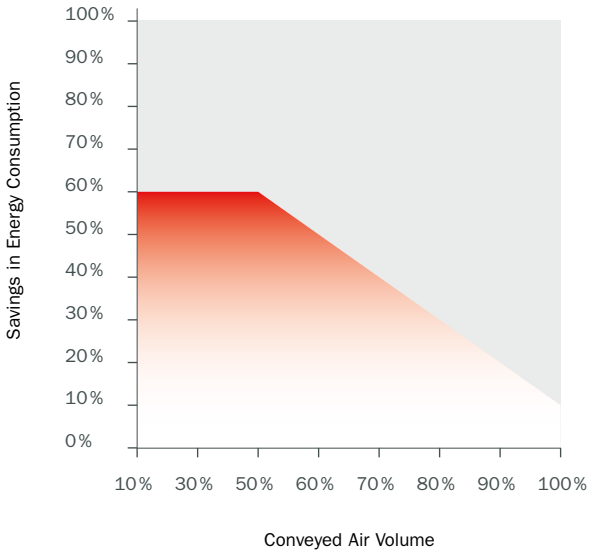
One final point

Please contact us if you like to explore ways of saving costs in the operation of your pneumatic conveying system. We offer in-depth advice, without obligation and free of charge. If you think that our system could be of benefit to you and you would like to try our system, we can offer a trial on a sale on approval basis; this allows you - without risk - to try the system and establish the potential savings. The diagram on the right shows the savings in Euros and Cents. The energy cost per cubic meter of conveyed air increases with an increase in required pressure. This diagram also illustrates the potential savings for different load factors, and the increase in savings with increasing pressure. Summary: Cost savings for a pneumatic conveying system increase with an increase in air volume and pressure, and with a widening range between full load and minimum load.

Energy costs per m^3/hour conveyed air volume per year as a function of the total pressure and system loading



Savings in engergy consumption as a function of the conveyed air volume



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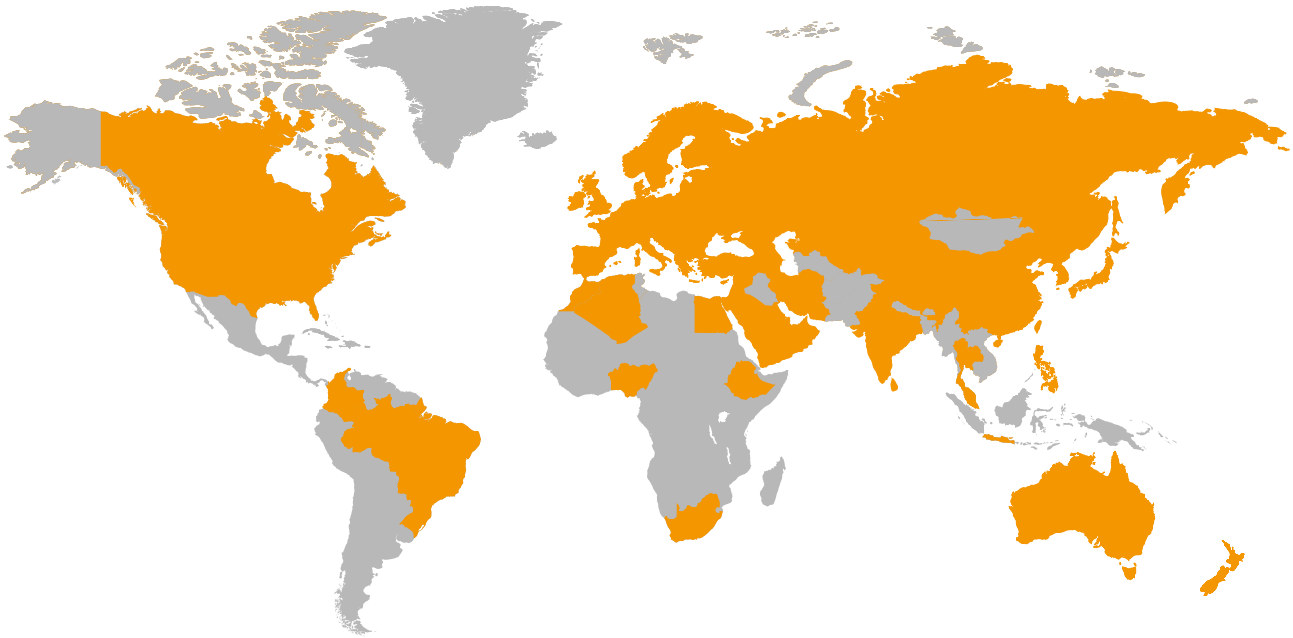
We have delivered globally more than 40,000 systems in just over 40 years

■ Countries where Höcker Polytechnik has reference customers



HÖCKER POLYTECHNIK GmbH

Borgloher Straße 1 · 49176 Hilter · Germany · Fon + 49 (0) 5409 405-0 · Fax + 49 (0) 5409 405-555

www.hoecker-polytechnik.de · info@polytechnik.de

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