



## Energy-saving pumps

### PX modular system and LMP



- Huge output range, precise output adjustment:

	LMP	PX
Speed range	1400 – 3600 min <sup>-1</sup>	360 – 3600 min <sup>-1</sup>
Max. delivery pressure/head	120 bar	250 m
Max. delivery rate	570 l/min	170 l/min

- Up to 70% energy savings
- High degree of operational safety and long pump service lives

**Spandau**  
**pumpen®**

**The innovative energy-saving pumps from the LMP and PX modular systems with integrated frequency converters are energy efficient, operationally safe and economically convincing alternatives to standard solutions:**

**Energy-saving pumps improve the process flows of machines and systems**

- Optimized adaptation to the respective machining process due to speed control
- Gentle start-up due to programmable start-up time
- Low level of wear on rotating components
- Low-noise operation



**Keep the entire machining process under control with a single energy-saving pump**

- Delivery output can be adjusted precisely to the respective output requirements
- Universal controllability of pump speeds through all pressure ranges
- Independent of voltage fluctuations in the power supply



**Use of frequency converters, a convincing technology**

- Frequency converters operate with almost no loss and require absolutely no maintenance
- Use of standard motors with consistently high power factors across the entire control range ensure low power consumption
- Delivery pressure and delivery rate correspond exactly to the required target quantity in each case
- Economically convincing, energy efficient alternative to standard solutions

**Sustainability criteria fulfilled**

- Speed regulation guarantees effective delivery output and use
- Low heat input into the overall system and thus reduced expenses required for cooling
- Up to 70% energy savings can be achieved in practice



**Designed for numerous usages**

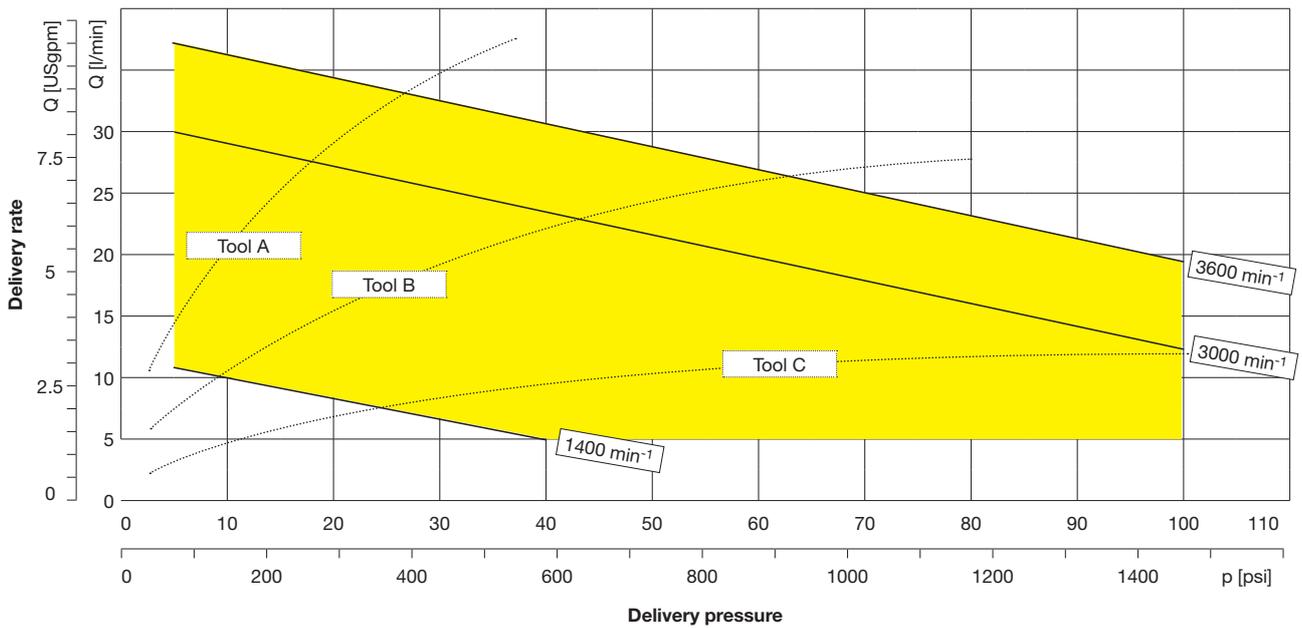
- Solution for original equipment manufacturers and retrofitters
- Machine tools
- Coolant supply and preparation systems
- and much more

**Fast and easy start-up, smooth handling in continuous operation mode**

- Fast and easy start-up of energy-saving pumps with integrated frequency converter
- Convenient integration in machine control
- No separate control cabinet required
- Continuously adjustable pressure regulation via analog signal
- Programmable pressure levels are controlled digitally
- High degree of operational safety and long pump service lives

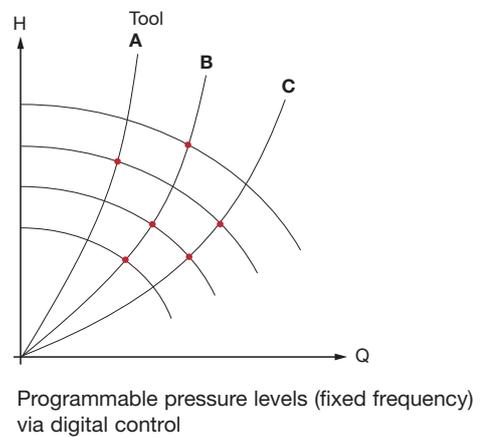
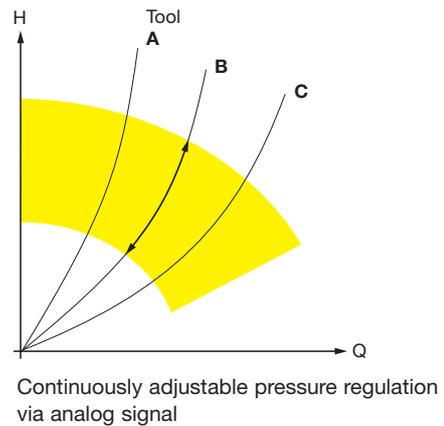
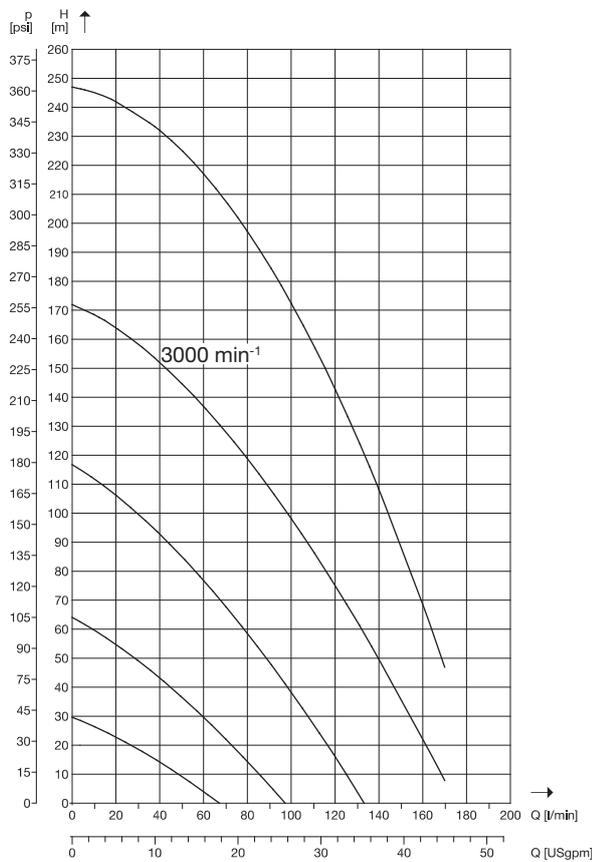


## LMP energy-saving pumps with frequency converters



→ For further information about LMP energy-saving pumps see brochure 1-6064-EN

## PX energy-saving pumps with frequency converters



→ For further information about PX energy-saving pumps see brochure 1-6062-EN

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