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## Linde and United Process Controls

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*Working together to help you obtain improved performance results in heat treatment applications.*

United Process Controls (UPC) and Linde signed a joint marketing agreement in an effort to help customers obtain traceable and repeatable performance results for heat treatment applications. While each of the companies operate independently, working together allows Linde and UPC to offer their customers access to an advanced and precise furnace control package, a wide range of industrial gas options and expertise to enhance their experience.

### **Linde Gas & UPC Gas Mixing Systems**

Linde and UPC's product offerings cover a broad spectrum of batch and continuous heat treating processes. These processes include carburizing, carbonitriding, neutral hardening, annealing, gas quenching and more. Regardless of the application you are using, the combination of the right gases and the right system help improve your process.

Ensuring a proper mixed gas ratio is paramount for achieving continuous, precise, and reproducible results for heat treat applications. UPC's control panel systems are the first with built-in flow rate calculations to automatically set the nitrogen and hydrogen flow rates based on a desired hydrogen concentration percentage. UPC's systems also incorporate a full-color touch screen interface with an integrated paperless chart recorder to track flow rates, furnace temperature, dew point, and other variables as necessary. Along with Linde's industrial gases, UPC's systems can advance processes so that there will be fewer parts to rerun, rework, or scrap entirely.

Both United Process Controls and Linde have the resources to work directly with you and can offer the technical support for your heat treating process. Working with reliable sources for your industrial gas needs and control panels is essential to helping you attain better results.

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Linde Offerings	UPC Offerings
<b>A variety of gases:</b>	<b>A wide range of products:</b>
<ul style="list-style-type: none"> <li>→ Hydrogen      → Helium</li> <li>→ Nitrogen      → Chemical Acetylene</li> <li>→ Argon</li> </ul>	<b>Industrial Flow Controls:</b>
<b>Integrated gas supply capability:</b>	→ Waukee Flo-Meter™ & FurnaceMeter™: Precision flow measurement and control equipment
<ul style="list-style-type: none"> <li>→ Cylinder      → Onsite</li> <li>→ Liquid</li> </ul>	<b>Industrial Sensors:</b>
<b>Reliable product supply:</b>	→ Oxygen/Carbon probes
<ul style="list-style-type: none"> <li>→ Nationwide network of air separation plants</li> <li>→ National logistics systems</li> <li>→ Tracker automated product delivery systems</li> </ul>	→ FurnaceDoctor – 3-Gas Analyzer (CO, CO <sub>2</sub> , CH <sub>4</sub> )
	→ AtmoSense™: Individual Gas Analyzers (Dew Point, CO, CO <sub>2</sub> , CH <sub>4</sub> , O <sub>2</sub> )
	→ H <sub>2</sub> Smart™
	<b>Controls and Software:</b>
	→ Protherm Controllers
	→ Supervisory Systems (PT-9800)
	→ PLC Based Solutions
	→ HT-Tools (Simulation Software)

**Safety** Safety is an important component of both Linde and UPC's day-to-day activities. They make every effort to inform both their employees and customers of best safety practices.

At Linde, you can count on them to deliver quality gases and services, as well as their commitment to operate safely and reliably every step of the way. They hold themselves to the goal of zero recordable injuries and zero lost workday cases across their entire business and they strive to meet this goal every day. In addition, they provide safety material required for their products and equipment.

At UPC, they work closely with their customers to design and engineer systems that are sized correctly for the desired gas flow rates and applications. All UPC mixing panels are built to meet, NFPA 86 safety guidelines. UPC incorporates safety devices such as air flow switches, high and low gas pressure switches, over-temperature limiting devices, and integrated nitrogen purge. They also provide the necessary information to use their products safely.

**Quality** Quality is an important to maintain the satisfaction of our customers and theirs. UPC works with customers from all different industries to help them meet several quality and specification standards including NADCAP aerospace heat treating standards, CQI-9 American Automotive standards for quality, and other national/international specifications. Linde works with customers to evaluate their industrial gas purity system requirements and can provide a variety of options to meet those needs.

**We're Here for You!** Linde and UPC are committed to your satisfaction every step of the way. We can provide you with a complete gas supply system and control panel design, assist with the installation, provide qualified field support for your process start-ups and fine tuning, and offer you analytical and diagnostic resources, as needed. Visit our websites or call to learn more.

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