



## AZ - RÚRKOVÉ PECE S ÔSMIMI ZÓNAMI

**The AZ is an eight zone tube furnace for controlled temperature profiles. These zones can be used to generate temperature profiles along the heated length of the furnace.**

With eight zones, thick insulation, and highly symmetrical winding of the heating elements throughout the entire AZ furnace, a uniformity of better than  $\pm 5$  °C is achieved. A key advantage of the eight individually controlled zones is the extension of the uniform length inside the furnace. Additionally, the temperature profile can be precisely controlled for linear increases, peaks, or other user defined profiles.

One process well suited for the AZ tube furnace is chemical vapour deposition as a temperature gradient can be established in the furnace for evaporation of precursor material at the high temperature end zone and sublimation of the vapour onto the substrate at the cooler temperature end zone. All zones are individually controlled and monitored with thermocouples.

## ŠTANDARDNÁ VÝBAVA

- | Similar construction to FHA / FHC tube furnaces
- | Eight-zone control for variable heating profiles
- | Gradients, linear increase/decrease etc. of temperature along the heated length
- | Extended uniform temperature distribution
- | Short heating and cooling rates
- | Automatic operation
- | Data recording for quality management
- | Retransmission of setpoint

## MOŽNOSTI (UVEĎTE PRI OBJEDNÁVKE)

- | Dostupná je široká rada digitálnych regulátorov, multi segmentových programátorov a ústrední. Tieto pece môžu byť vybavené komunikačným rozhraním RS232, RS485 alebo Ethernetom - viac informácií
- | Ochrana proti prehriatiu (odporúčame najmä pre ochranu vzácnych materiálov a pri bezobslužnej prevádzke)
- | K dispozícii je široký výber pracovných trubiek s rôznymi priermi a z rôznych materiálov: napr. z kremeňa, keramiky alebo kovu
- | 'L' stand for vertical usage
- | Izolačné záslepky a radiačný štít zaisťujú nízke tepelné straty a zlepšujú uniformitu teploty
- | Modifikovaná atmosféra a vákuové zostavy sú k dispozícii - Viac informácií
- | Vákuová zariadenia s voľbou rotačného čerpadla alebo turbomolekulárneho čerpadla sú k dispozícii pre pece s vnútorným priemerom trubiek 60 mm a vyššie
- | Complete automation by Siemens SPS control with touch panel and mass flow controller for the gases on request
- | Other diameters and heated lengths on request

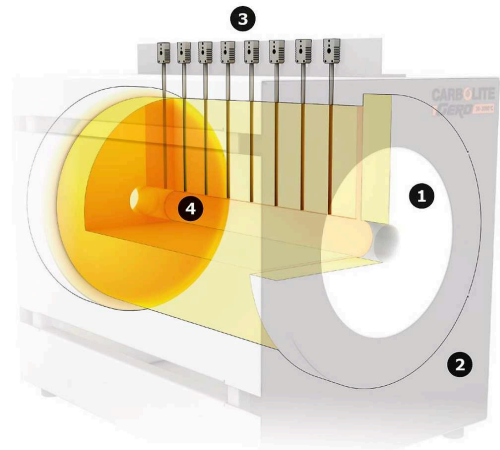
### View inside

1. ceramic fibre insulation
2. outer frame
3. eight thermocouples for control
4. usable volume

The ceramic fibre insulation is constructed in multiple layers and assembled with great care to ensure no gaps are present between each of the layers. The insulation layers are arranged with a specific overlap to provide excellent temperature uniformity inside the furnace.

The control module is very compact and built into the support frame of the furnace. A touch panel interface provides user-friendly and intuitive control of the furnace operating parameters.

No water cooling is necessary as the housing is spaced from the insulation such that it is cooled by convective cooling. The only instances that require water cooling are for use with cooled work tube flanges, i. e. to assemble a vacuum pumping unit.



View inside

## TECHNICKÉ ÚDAJE (MODELY)

	<b>AZ 13/32/360</b>	<b>AZ 13/50/430</b>
<b>Maximálna teplota (°C)</b>	1350	1350
<b>Rozmery: vonkajšie V x Š x H (mm)</b>	990 x 1800 x 500	990 x 1800 x 500
<b>Priemer rúrky (mm)</b>	32	50
<b>Vykurovacia dĺžka (mm)</b>	360	430
<b>Celková hmotnosť (kg)</b>	500	550
<b>Výkon (kW)</b>	1.5	2.9
<b>Napätie (V)</b>	400 (3P)	400 (3P)
<b>Prúd (A)</b>	3 x 4	3 x 9
<b>Sériová poistka (A)</b>	3 x 16	3 x 16

	<b>AZ 13/80/810</b>	<b>AZ 13/110/1000</b>
<b>Maximálna teplota (°C)</b>	1350	1350
<b>Rozmery: vonkajšie V x Š x H (mm)</b>	990 x 1800 x 500	1200 x 1800 x 520
<b>Priemer rúrky (mm)</b>	80	110
<b>Vykurovacia dĺžka (mm)</b>	810	1000
<b>Celková hmotnosť (kg)</b>	600	650
<b>Výkon (kW)</b>	7.3	11.3
<b>Napätie (V)</b>	400 (3P)	400 (3P)
<b>Prúd (A)</b>	3 x 12	3 x 19
<b>Sériová poistka (A)</b>	3 x 16	3 x 25

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