

# DK™ Series

## Catalytic ozone destruct units

OZONE

**Off-gases containing trace levels of un-reacted ozone must be passed through a thermal or catalytic type vent ozone destruct unit before venting to the atmosphere.**

### APPLICATIONS

- Catalytic ozone destruct units are meant to be used in all main applications of ozone. This includes especially:
  - Drinking water treatment
  - Industrial oxidation processes
- The DK™ units are also advisable for waste water applications, when the ozonation step intervenes as a final treatment.

### MAIN CHARACTERISTICS

- The DK™ units include a heater, reaction chamber, suction fan, control system and are an energy-efficient solution



### OZONE DESTRUCT TECHNOLOGY: DK™ SERIES

Exhaust gases from processes where ozone has been used invariably contain residual amounts of un-reacted ozone. Before this exhaust can be vented into the atmosphere, it is necessary to decompose the traces of ozone. In most countries it is prohibited to release even low-level concentrations into the atmosphere. There are various methods available to treat vent gas.

Two popular methods are thermal and catalytic destruction which are selected to match the process in question. The thermal destruct units raise the temperature of the off-gas to a level where the half-life of the ozone is reduced to milliseconds and in the catalytic units the ozone molecule decay rate is accelerated on the surface of the catalyst converting the ozone to oxygen.

### HOW IT WORKS

Normally, vent gases are saturated with water vapour and contain ozone levels up to 2.5 wt%. Before these gases can be treated, it is necessary to heat them so that the relative humidity is less than 100% in order to prevent condensation forming on the surface of the catalyst.

Catalytic destruction does not require high temperatures and very rapidly decomposes ozone to oxygen. Care has to be taken to ensure that catalytic poisons do not enter the system. The DK™ units include the heater and reaction chamber.



### PRODUCT HIGHLIGHTS

- > Very high ozone destruct efficiency
- > Low power consumption
- > Long service life
- > Virtually maintenance-free
- > Easy integration
- > Compact dimensions
- > High product integrity
- > Green solution

**OZONIA**

## TECHNICAL DATA

DK™ MODEL	Flow (g/h)		Ozone Level (barg)		Operating Pressure (mbar)	Apparent Power (kVA)	Dimensions WxLxH (mm)	Weight (kg)
	Volume (m³/h)	Mass (kg/h)	Inlet (wt%)	Outlet (ppm)				
DK-90	90	110	< 2.5	< 0.1	-35 ... 50	2.54	765 x 1165 X 1500	176
DK-150	150	190	< 2.5	< 0.1	-35 ... 50	3.74	780 x 1350 x 1550	226
DK-230	230	290	< 2.5	< 0.1	-35 ... 50	5.24	790 x 1400 x 1550	260
DK-340	340	430	< 2.5	< 0.1	-35 ... 50	7.68	895 x 1600 x 1710	358
DK-610	610	780	< 2.5	< 0.1	-35 ... 50	12.38	895 x 1710 x 1650	564
DK-960	960	1240	< 2.5	< 0.1	-35 ... 50	19.76	1000 x 2250 x 1800	735
DK-1390	1390	1790	< 2.5	< 0.1	-35 ... 50	28.70	1120 x 2410 x 1800	957

## TECHNICAL FEATURES

- Design standards: EN, IEC, ISO, SN
- Connection data: 3 x 400 VAC ±10%, 50 Hz / 60 Hz
- Protection class: IP 54
- Conformity: CE

## MATERIALS

- Heater: Incoloy 800
- Housing and pipes: stainless steel
- Fan: aluminium
- Catalyst: metal oxide
- Insulation: mineral wool
- Frame: galvanised steel

## SIGNALS

- Temperature heater higher than max
- Temperature inlet gas lower than min
- Temperature inlet gas higher than max
- Temperature reactor higher than max
- Ozone concentration higher than max

## OPTIONS

- Off-Gas Valves
- Check Valve
- Ozone Monitoring

## CONTACTS

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