

<b>Kunde</b>			
Abteilung			
Bearbeiter			
Telefon	Fax		

Kienhorststr. 59, 13403 Berlin  
 Tel.: +49(30)438092-0  
 Fax: +49(30)438092-26  
 e-mail: info@vdlldelmas.de



## TECHNICAL DATA FOR HEAT EXCHANGER AIR/AIR

### **General information**

(Description, Function, Operating conditions, Assembly conditions, Permissible limits, VDE degree of protection)

### **Regulations for acceptance**

(i. e.: TÜV / ASME / TEMA / Germanischer Lloyd / American Bureau of Shipping / Det Norske Veritas / Bureau Veritas)

transfer capacity	<input type="checkbox"/> incl./ <input type="checkbox"/> excl. capacity of blowers	kW	
No. of heat exchanger elements for 100% transfer capacity		piece	
operating altitude of the plant		m.o.N.N.	
VDE-degree of protection		<input type="checkbox"/> IP 23	<input type="checkbox"/> IP 54
		<input type="checkbox"/> IP 55	<input type="checkbox"/> IP 56
<b>Data for the circulating air side</b>		<input type="checkbox"/> around the pipes	<input type="checkbox"/> through the pipes
data for the air quality (relative humidity, aggressiveness)		% rel.humidity	
circulating air flow rate		m³/h	
reference condition for the circulating air flow rate		°C, mbar	°C mbar
inlet/outlet temperature of the heat exchanger		°C	in= out=
contamination factor (fouling factor) or surface reserve		m²*K / W or %	
permissible pressure drop in the heat exchanger		mbar	
design overpressure in the heat exchanger		bar	
test overpressure / test temperature		bar , °C	bar °C
<input type="checkbox"/> use of air filters expected		EU-Class	
additional pressure loss of air filters (ref. to $\gamma_{Luft} = 1,2$ )		mbar	
<b>Data for the cooling air side</b>			
data for the air quality (relative humidity, aggressiveness)		% rel.humidity	
cooling air flow rate		m³/h	
reference condition for the cooling air flow rate		°C, mbar	°C mbar
inlet/outlet temperature of the heat exchanger		°C	in= out=
contamination factor (fouling factor) or surface reserve		m²*K / W or %	
permissible pressure drop in the heat exchanger		mbar	
<input type="checkbox"/> use of air filters expected		EU-Class	
additional pressure loss of the air filters (ref. to $\gamma_{Luft} = 1.2$ )		mbar	

### **Selection of the cooling system**

<input type="checkbox"/> <b>circular tubesystem</b>	<input type="radio"/> 16Ø * 0.5	<input type="radio"/> 20Ø * 1.0	<input type="radio"/> 25Ø * 1.0	<input type="radio"/> 32Ø * 1.0
	<input type="radio"/> 40Ø * 1.0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> <b>flat tubesystem</b>	<input type="radio"/> 22*7 * 0.5	<input type="radio"/> 36*14 * 1.0	<input type="radio"/>	<input type="radio"/>
<b>connection tube/tube-plate</b>	<input type="checkbox"/> tube expansion	<input type="checkbox"/> PU-Casting	<input type="checkbox"/> rolling in	<input type="checkbox"/> welding in
<b>assembly position of the tubes</b>	<input type="checkbox"/> tubes vertical	<input type="checkbox"/> tubes horizontal	<input type="checkbox"/> tubes with ° inclination	

### **Selection of the material**

<b>tubes</b>	<input type="checkbox"/> 1.4301	<input type="checkbox"/> AlMg3 / AlMgSi0.5	<input type="checkbox"/> steel	<input type="checkbox"/> CuZn20Al	<input type="checkbox"/> CuNi10Fe
	<input type="checkbox"/> 1.4404	<input type="checkbox"/> steel, coated	<input type="checkbox"/> SFCu	<input type="checkbox"/> CuZn28Al	<input type="checkbox"/> CuNi30Fe
<b>tube plates</b>	<input type="checkbox"/> high grade steel 1.	<input type="checkbox"/> St37 / HII +EP-coating	<input type="checkbox"/> St37,zinc coated	<input type="checkbox"/> CuNi10Fe	<input type="checkbox"/> CuNi30Fe
<b>chambers</b>	high grade steel 1.	<input type="checkbox"/> St37 / HII +Ocoating	<input type="checkbox"/> grey cast iron	<input type="checkbox"/> cast bronze	<input type="checkbox"/> CuNi10Fe
<b>shell/casing</b>	<input type="checkbox"/> high grade steel 1.1.	<input type="checkbox"/> St37 / HII +Ocoating	<input type="checkbox"/> grey cast iron	<input type="checkbox"/> cast bronze	<input type="checkbox"/> CuNi10Fe
<b>seals</b>	<input type="checkbox"/> NBR (Perbunan)	<input type="checkbox"/> KLINGERSIL 4400	<input type="checkbox"/> CR-Neoprene	<input type="checkbox"/> EPDM	<input type="checkbox"/> Viton