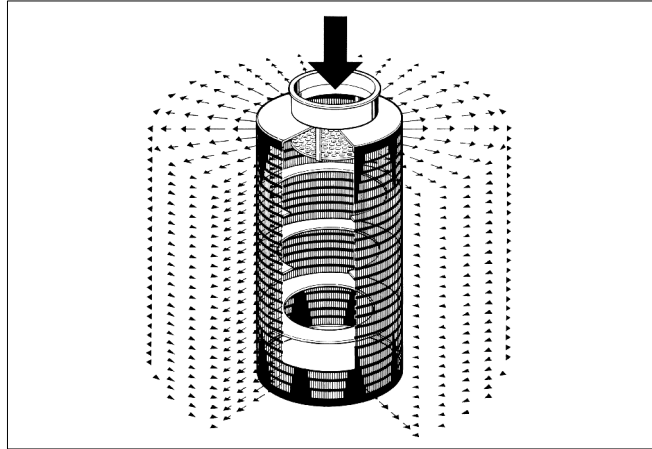


***LTG Incorporated***

## ***Displacement Diffuser Type DLQ***



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## ***Diffusers are most important for the performance of A/ C and ventilation systems in the room***

### ***Application***

The Displacement Diffuser DLQ was specially designed for:

- Foyers and entrance areas
- Sports arenas and crowded areas
- Work areas where ventilation from above is not possible
- Areas where inductive ventilation is not wanted
- Work areas with extreme heat loads and elevated levels of contaminants

The LTG Displacement Diffuser type DLQ can be installed at a height of up to 3-4 m, or on the floor. The airflow connection can be from below or from above.

With the Displacement Diffuser type DLQ, LTG has expanded its diffuser series of the cylindrical perforated sheet metal housing Type DL. LTG now offers a complete scope of supply for comfort and industrial applications with a suspension height of up to 12 m.

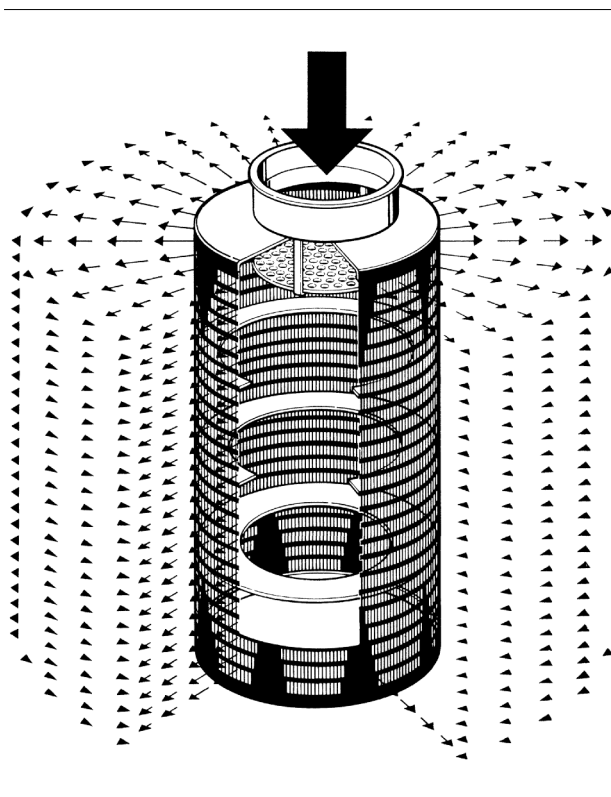
### ***The advantages***

- low pulsating flow of supply air
- high capacity
- low noise level
- radial air distribution
- low air velocities in the room
- flexibility in connection and installation

### ***The function***

The supply air flows through a perforated sheet metal plate into the housing and is diverted by internally mounted deflectors. The specially designed perforation of the cylindrical housing decreases the supply air velocity quickly and reduces the noise level.

After a short horizontal movement, the supply air quickly falls to low level at low velocity and disperses. In areas with machinery and work stations, the hot air rises and people get to enjoy cooled supply air.



### ***Dimensions***

Height without connecting piece:	860 mm / 33.9"
Total height:	920 mm / 36.2"
Connecting piece diameter:	315 mm / 12.4"
Nominal diameter:	500 mm / 19.7"

### ***Design***

The Displacement Diffuser Type DLQ is available in model size 500. The perforated sheet metal housing is made of galvanized sheet steel and can be powder coated in colors similar to RAL to match the architectural features requested by the owner.

### ***Legend***

#### **DLQ 500 / M / P 7035**

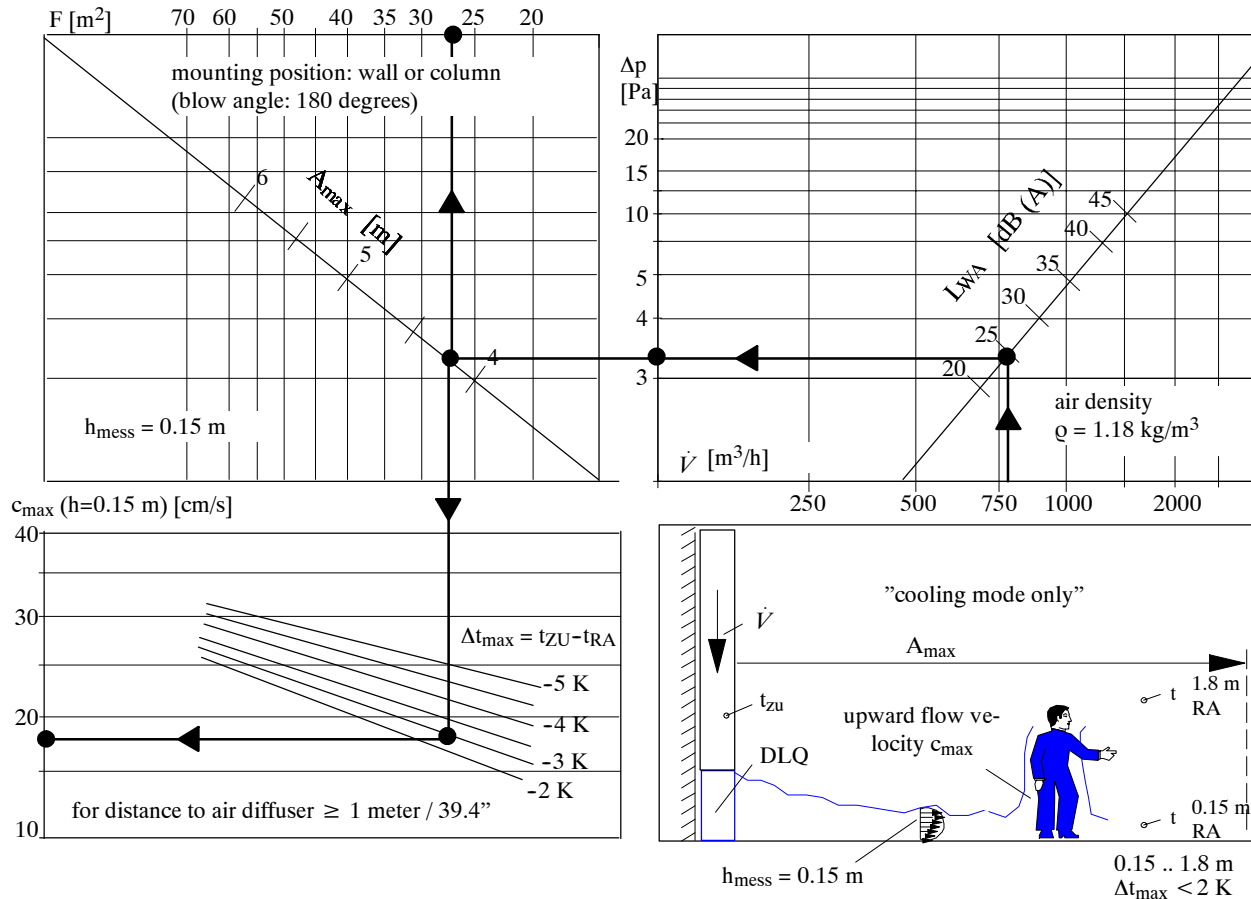
Duct connection \_\_\_\_\_  
 S = plug connection  
 F = flange connection  
 M = Metu flange connection (recommended standard)

Surface \_\_\_\_\_  
 V = galvanized  
 P... = powder coated similar to RAL  
 color number has to be supplied

## Displacement Diffuser Type DLQ

### Selection diagram of DLQ 500

(standing on the floor)



### The design

When the flow volume is known, and depending on the mounting choice, the above diagrams will show the following air engineering data:

Noise level	$L_{WA}$	[dB(A)]
Pressure drop	$\Delta p$	[Pa]
Max. distance of air distribution	$A_{max}$	[m]
Ventilated area	$F$	[m <sup>2</sup> ]

Depending on the temperature difference  $\Delta t$  between supply and room air, the room air velocity can be read from the chart for a distance of 1 m from the diffuser at a height of 0.15 m off the floor.

### Example 1:

#### Comfort range with floor-level installation

Known values:

Air volume	$\dot{V} = 800$ m <sup>3</sup> /h
Temperature difference	$\Delta t = -3$ K

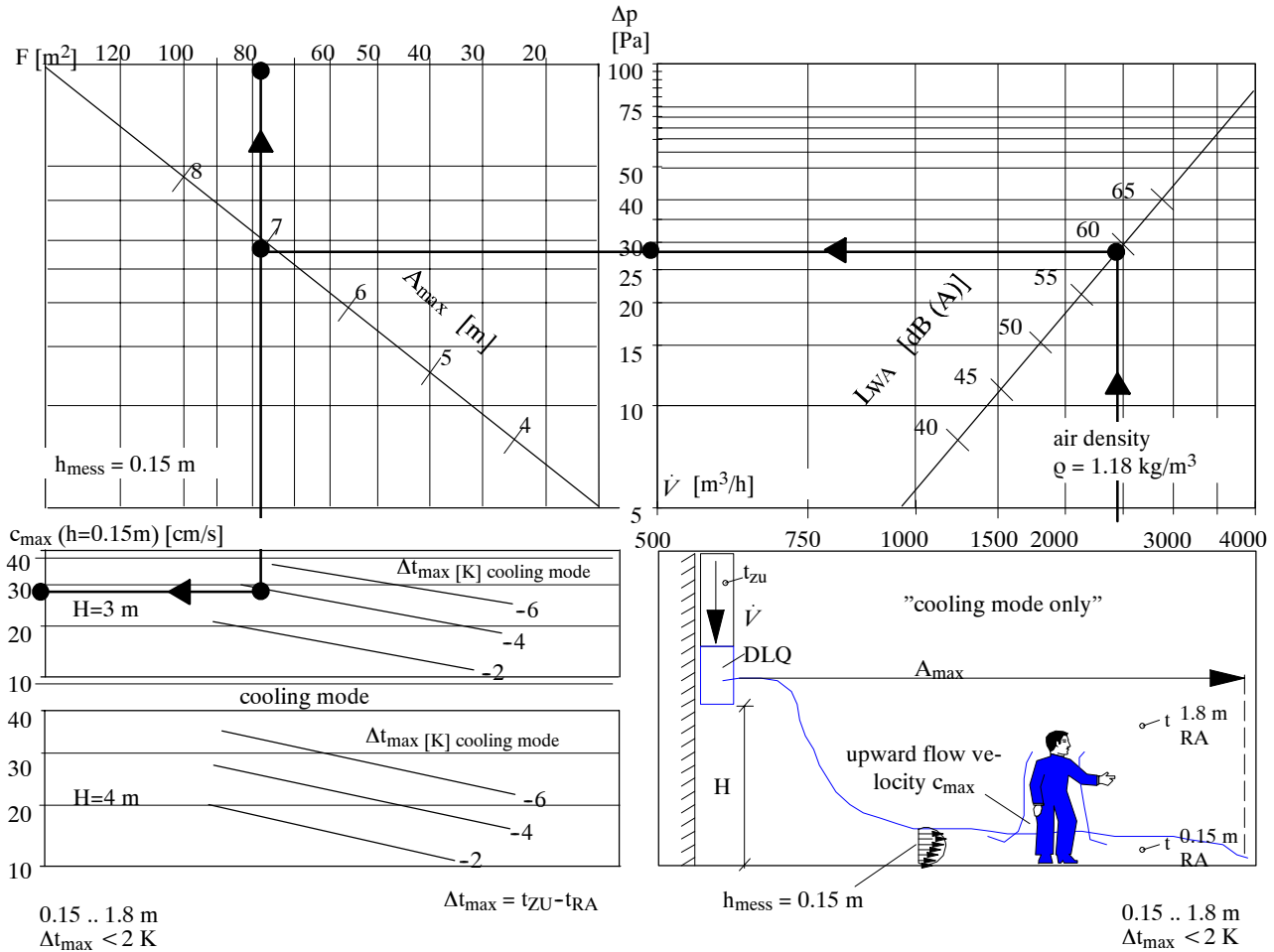
Read from chart:

Noise level	$L_{WA} = 25$ dB(A)
Pressure drop	$\Delta p = 3.5$ Pa
Max. distance of air distribution	$A_{max} = 4.3$ m / 14'
Ventilated area	$F = 28$ m <sup>2</sup>
Supply air velocity	$c_{max} = 0.30$ m/s

# Displacement Diffuser Type DLQ

## Selection diagram of DLQ 500

(mounting height 3...4 m)



### Example 2:

**Industrial application, mounted freely suspended at a height of 3 m**

Known values:

Air volume  $\dot{V} = 2500$  m<sup>3</sup>/h  
 Temperature difference  $\Delta t = -4$  K

Read from chart:

Noise level  $L_{WA} = 60$  dB(A)  
 Pressure drop  $\Delta p = 30$  Pa  
 Max. distance of air distribution  $A_{max} = 7$  m / 23'  
 Ventilated area  $F = 78$  m<sup>2</sup>  
 Supply air velocity  $c_{max} = 0.30$  m/s