MODEL **CFD**

CIRCULAR FLOOR DIFFUSERS

Performance Data

V (m^3/h)		$A_{eff.}$ (m^2)	
		0,0049	0,0088
50	$u_{eff.}$ (m/s)	2,8	
	$\Delta P_{tot.}$ (Pa)	7	
	SPL (dBA)	18	
60	$u_{eff.}$ (m/s)	3,4	
	$\Delta P_{tot.}$ (Pa)	10	
	SPL (dBA)	24	
70	$u_{eff.}$ (m/s)	4,0	
	$\Delta P_{tot.}$ (Pa)	15	
	SPL (dBA)	27	
80	$u_{eff.}$ (m/s)	4,5	2,5
	$\Delta P_{tot.}$ (Pa)	19	10,5
	SPL (dBA)	32	25
90	$u_{eff.}$ (m/s)	5,1	2,8
	$\Delta P_{tot.}$ (Pa)	24	14
	SPL (dBA)	34	28
100	$u_{eff.}$ (m/s)	5,7	3,2
	$\Delta P_{tot.}$ (Pa)	28	16
	SPL (dBA)	37	29
120	$u_{eff.}$ (m/s)	6,8	3,8
	$\Delta P_{tot.}$ (Pa)	43	24
	SPL (dBA)	42	34
140	$u_{eff.}$ (m/s)	7,9	4,4
	$\Delta P_{tot.}$ (Pa)	58	32
	SPL (dBA)	45	37
160	$u_{eff.}$ (m/s)	9,1	5,1
	$\Delta P_{tot.}$ (Pa)	75	42
	SPL (dBA)	49	40
180	$u_{eff.}$ (m/s)		5,7
	$\Delta P_{tot.}$ (Pa)		52
	SPL (dBA)		42
200	$u_{eff.}$ (m/s)		6,3
	$\Delta P_{tot.}$ (Pa)		65
	SPL (dBA)		44

V (m^3/h) : Air flow rate
$A_{eff.}$ (m^2) : Effective area
$u_{eff.}$ (m/s) : Effective area
$\Delta P_{tot.}$ (Pa) : Pressure Drop
SPL (dBA) : Sound Power Level

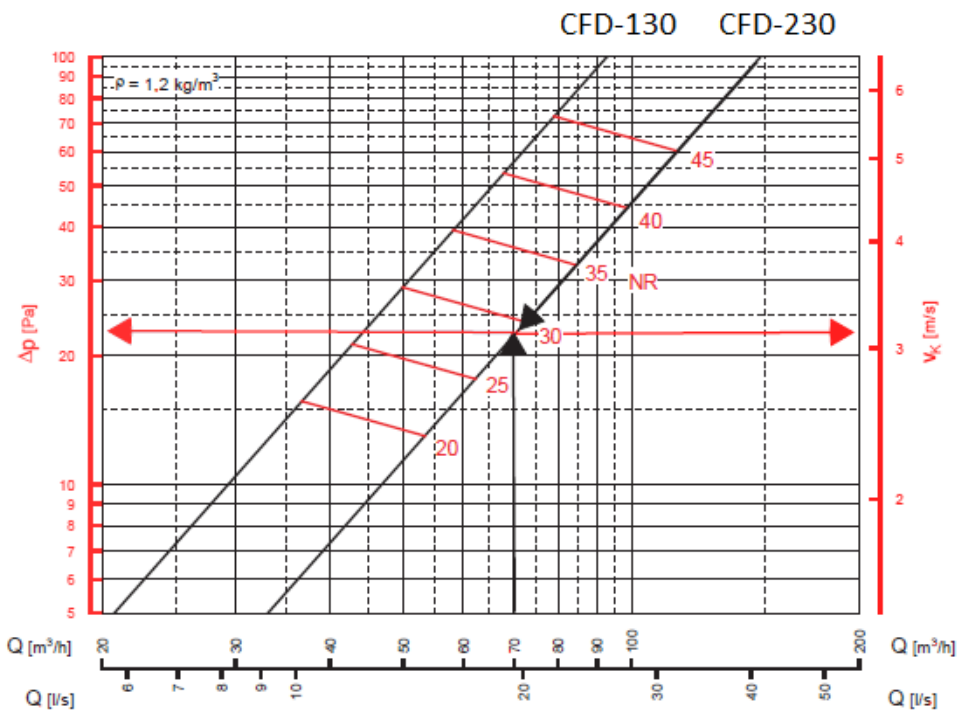
Submittal No.	Revision:	Date: 01/01/2019	Submitted by:	Date submitted:

MODEL **CFD**

CIRCULAR FLOOR DIFFUSERS

Performance Data

PRESSURE LOSS AND NOISE LEVELS



Q [m³/h] [l/s]	supply air flow rate
v_k [m/s]	velocity relating to the effective outlet area S
Δp [Pa]	total pressure loss
NR	noise rating (ISO standard, in relation to 10^{-12} W) taking no account of the attenuation of the room

The pressure loss and noise level do not vary noticeably with the type of plate (a, b, c, or d)

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