

ROTEC LÜFTUNGSGITTER BERLIN

MCAS

MODULAR CLEAN AIR SYSTEM



INHOUDSOPGAVE

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MULTI THROW



PERFORATED



CEILING



MCAS

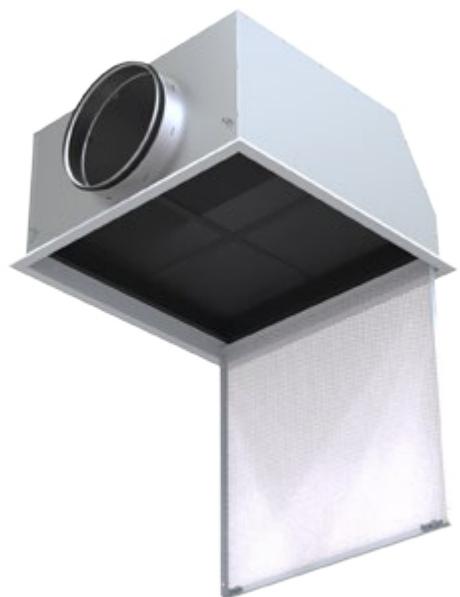
MCAS (MODULAR CLEAN AIR SYSTEM)

Grada MCAS is a unique modular ceiling diffuser system. You can use different diffusers in one type of plenum by using underlying exchangeable elements. The perforated front plate with reduced view of the inside gives the unit an esthetical finish. This system is primarily orientated towards the healthcare sector, where we have to meet high requirements in terms of hygiene, flexibility, energy consumption and comfort. In addition, the MCAS is perfectly suitable for schools, offices, public buildings...

MCAS has been developed with maintenance and cleanability in mind. The ergonomic push-pull lock ensures an efficient replacement of filters, exchange of elements and cleaning of the ceiling diffuser without having to use tools.

The MCAS allows you to adapt the diffuser when a room gets a new destination or when the lay-out changes. This is made possible thanks to easy to exchange elements. This enables you to make important savings on installation time and hence you reduce the costs of renovation or rearrangement of rooms.

The perforated front plate offers an esthetical finish for installation in false ceilings and the free exhaust of this diffuser as no negative influence on the airflow.



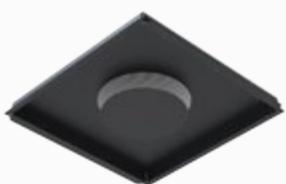
WHY MCAS?

- simple cleaning according VDI hygiene instructions (VDI 6022) – reduced installation height
- specific form for easy installation in false ceilings – very low noise levels
- easy adjustment to the function of the room
- energy saving due to air tightness according to EN1751
- one type of plenum in two sizes (300mm en 600mm), simplicity of ordering and mounting.

APPLICATIONS

MCAS is developed for the healthcare sector and areas where flexibility and hygiene are of paramount importance, such as hospitals, care centers, laboratories,...

UITVOERINGEN



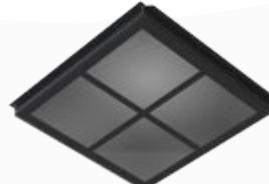
RADIAL AIR PATTERN

Air supply pattern with 360°, deflector plate (available in 3 sizes) is fixed using a magnetic strip.



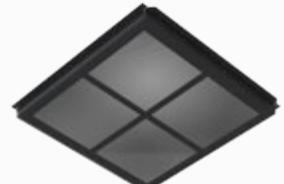
MULTI DIRECTIONAL

High inducing square ceiling diffuser with individual adjustable plastic nozzles for an airflow in multiple directions.



DISPLACEMENT

Diffuses fresh air homogeneously, and at low speed.



EXTRACTION

Exhaust of air ; you can also choose to use only the plenum with perforated panel for this version.

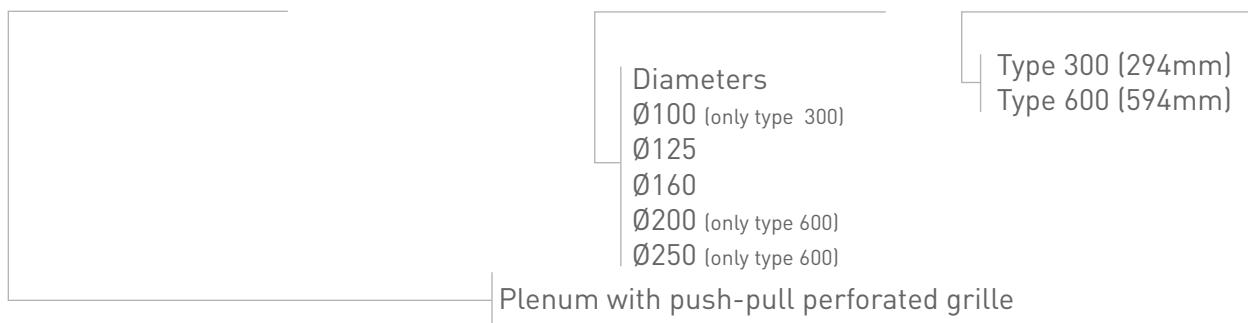
TECHNICAL DETAILS

APPLICATION	Product	MCAS
	Airflow direction	radial, displacement, multidirectional
	Airflow type	Supply or extraction
CONSTRUCTION	Plenum	Galvanised steel, airtight construction
	Interchangeable modules	Powdercoated steel plate
	Filter	Reticulated foam filter
	Installation height	240 and 300mm
	Frame construction	Folded sheet metal
MATERIAL	Standard material	Sheet metal
	Standard finishing	RAL9010
MOUNTING	Mounting brackets	Yes

HOW TO ORDER ?

Choose the type (always plenum + push pull perforated grille)

M	C	A	S	-	-	-	0	2	0	0		0	6	0	0
---	---	---	---	---	---	---	---	---	---	---	--	---	---	---	---

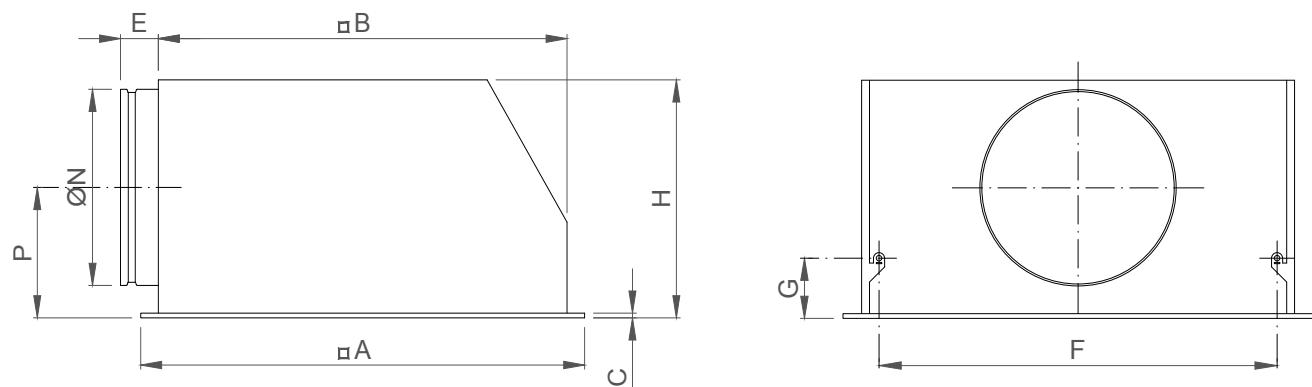


Choose the desired version for the module

M	C	R	B	-	-	-	-	-	-	-	0	3	0	0
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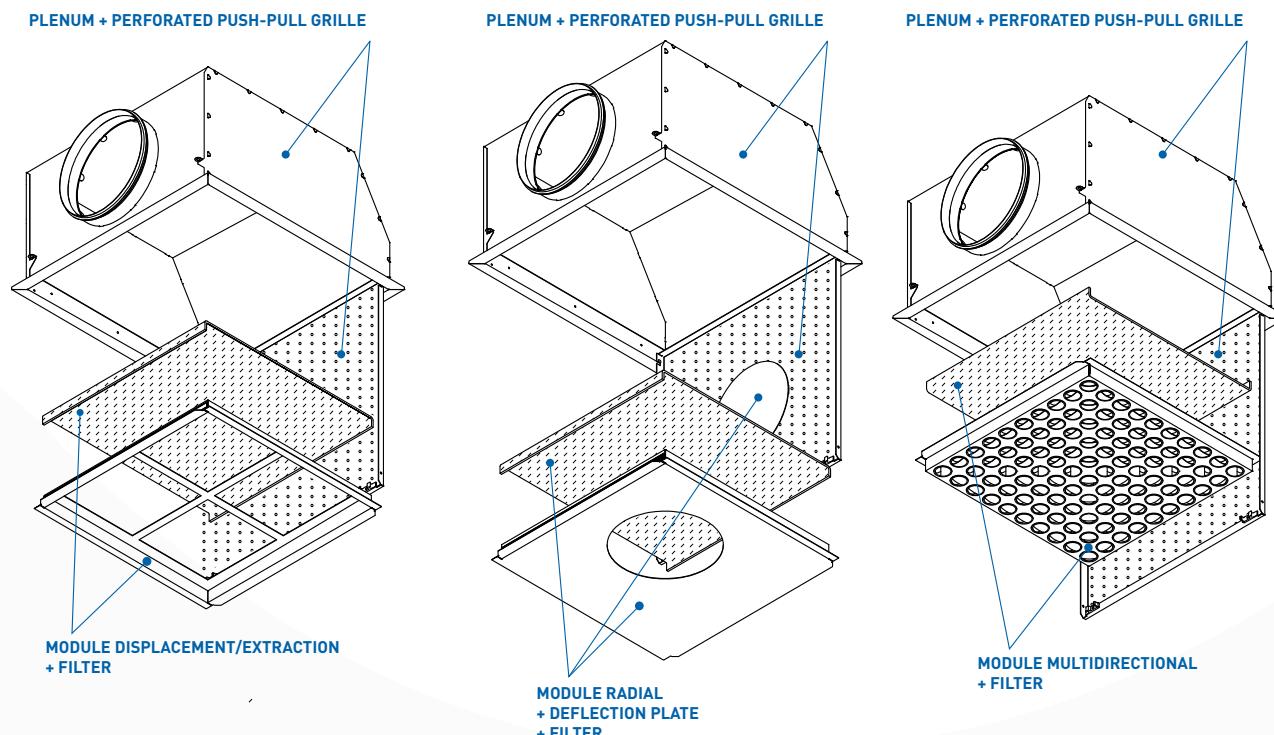


DIMENSIONS



SIZE	A	B	C	H	ØN	E	P	F	G
300 x 300mm	294mm	250mm	6mm	240mm	100,125,160mm	50mm	150mm	203mm	75mm
600 x 600mm	594mm	550mm	6mm	300mm	125,160,200,250mm	50mm	165mm	503mm	75mm

LAY-OUT



SYMBOLS USED

	UNIT	DESCRIPTION
Lw	dB(A)	Sound power without attenuation
Q	m ³ /h	Air volume
ΔPs	Pa	Static pressure loss
Lt	m	throw
v0	m/s	supply air velocity

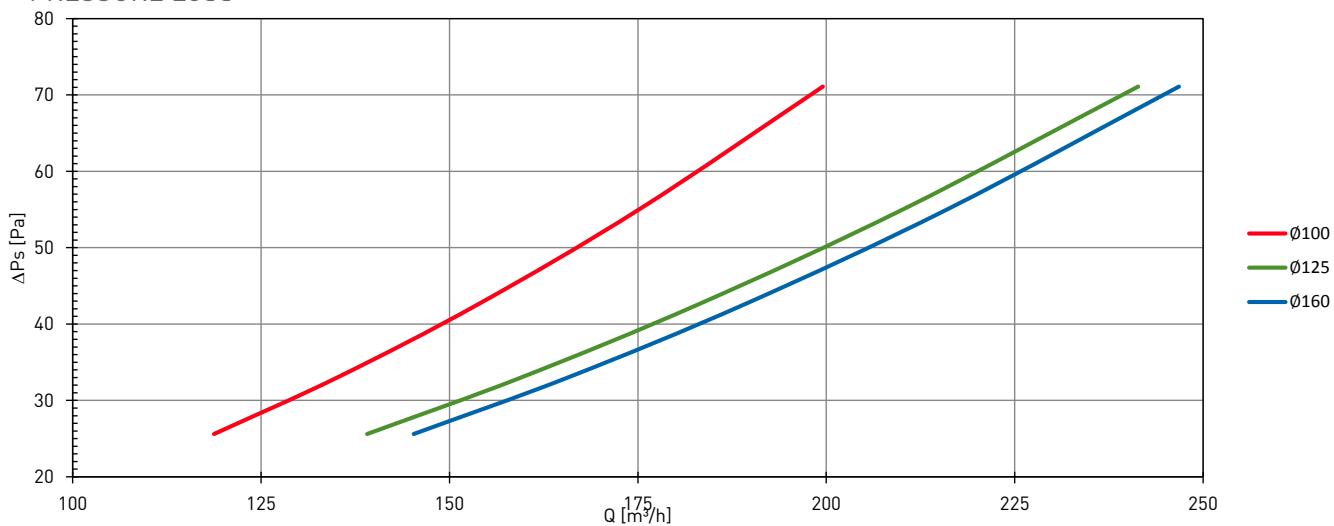
SELECTION GRAPHS TYPE 300

OPTION RA (RADIAL EXHAUST - SMALL DEFLECTOR)

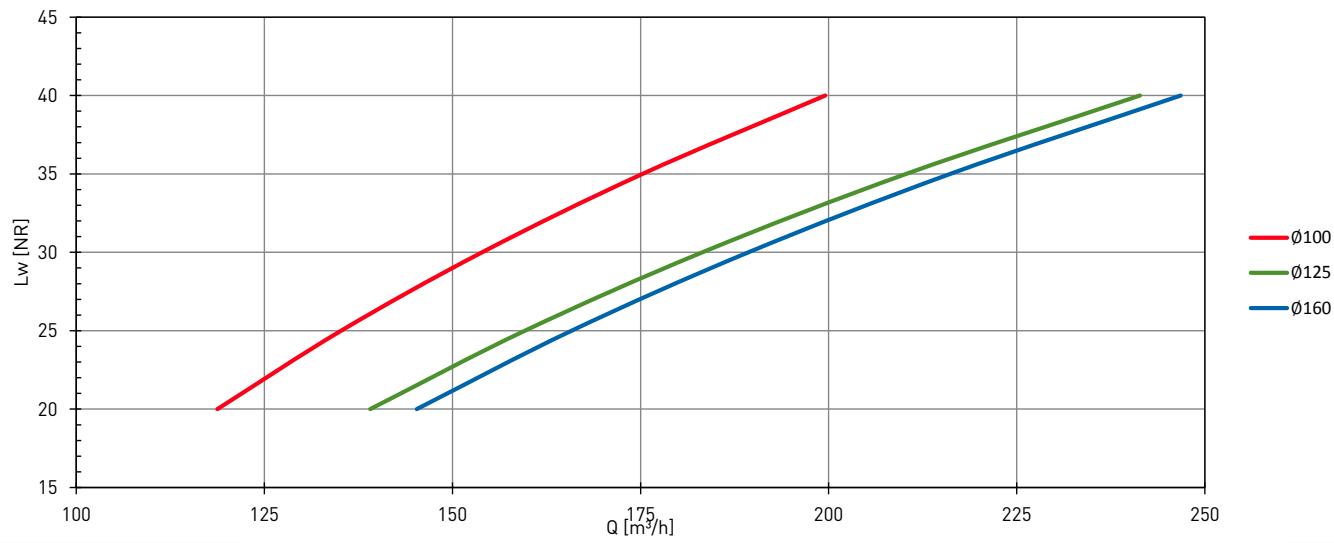
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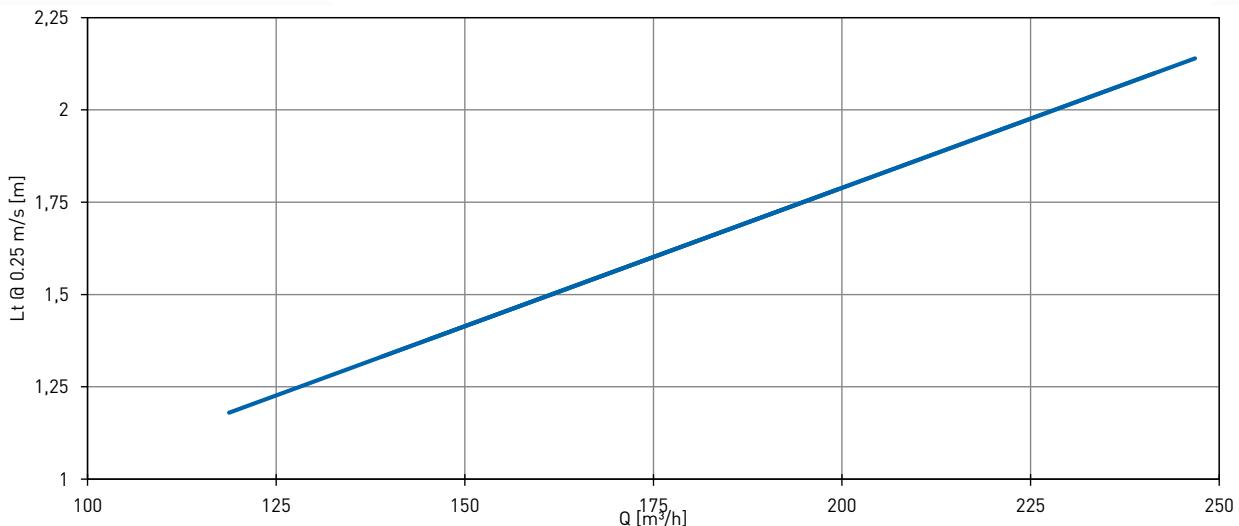
PRESSURE LOSS



SOUND GRAPH

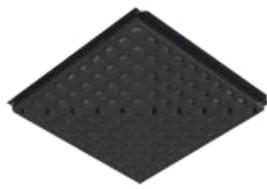


THROW

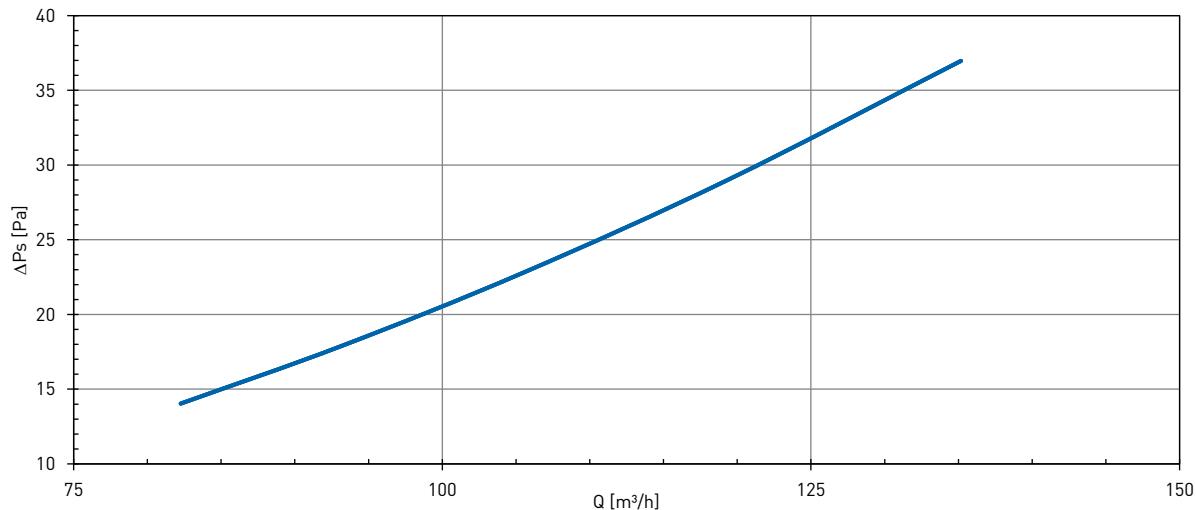


**SELECTION GRAPHS TYPE 300
OPTION MN (MULTIDIRECTIONAL)**

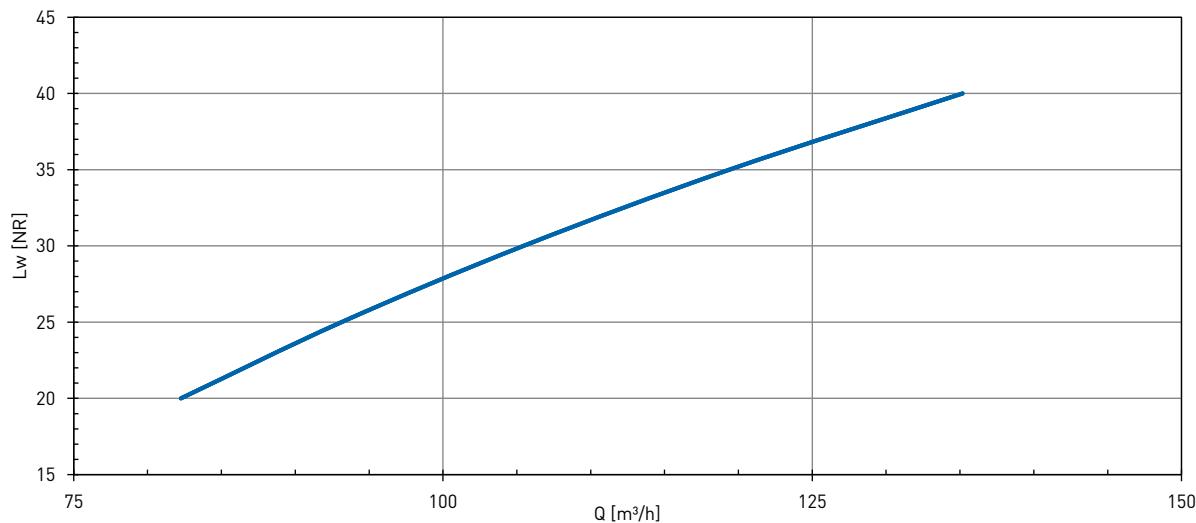
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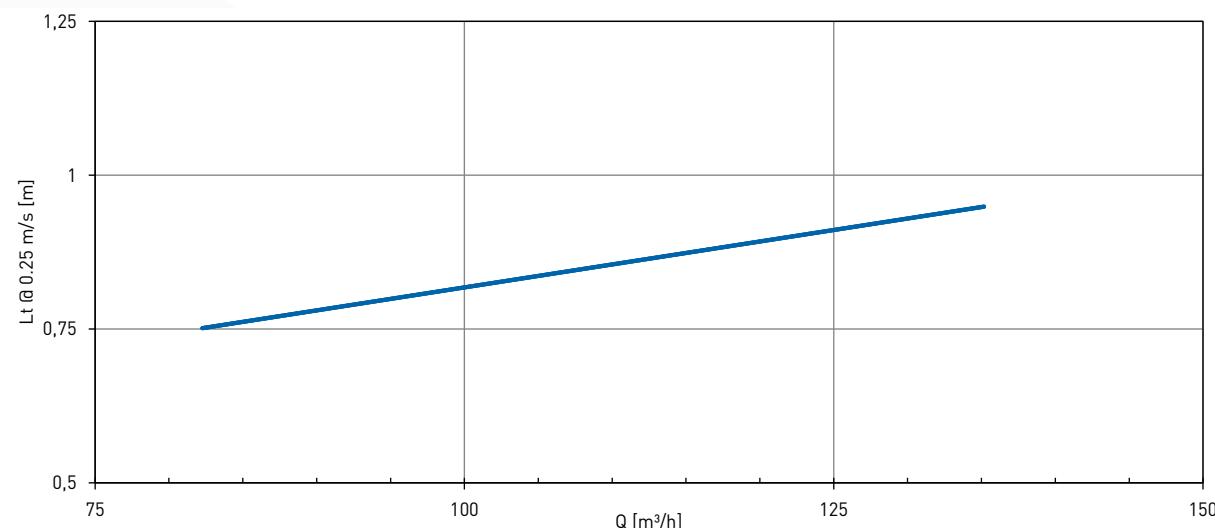
PRESSURE LOSS



SOUND GRAPH



THROW

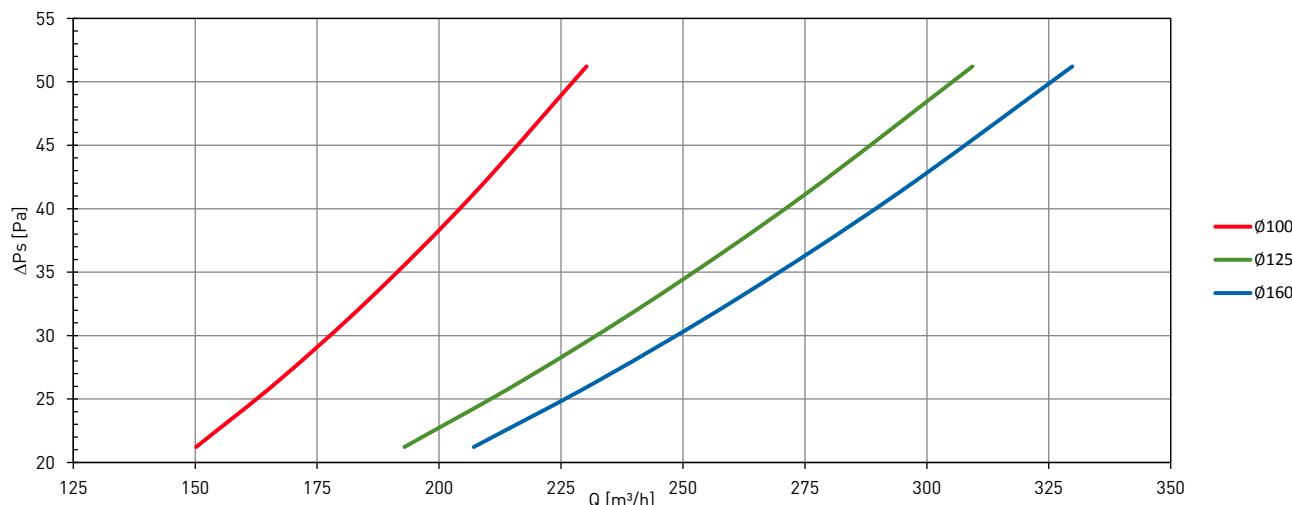


**SELECTION GRAPHS TYPE 300
OPTION VD (DISPLACEMENT)**

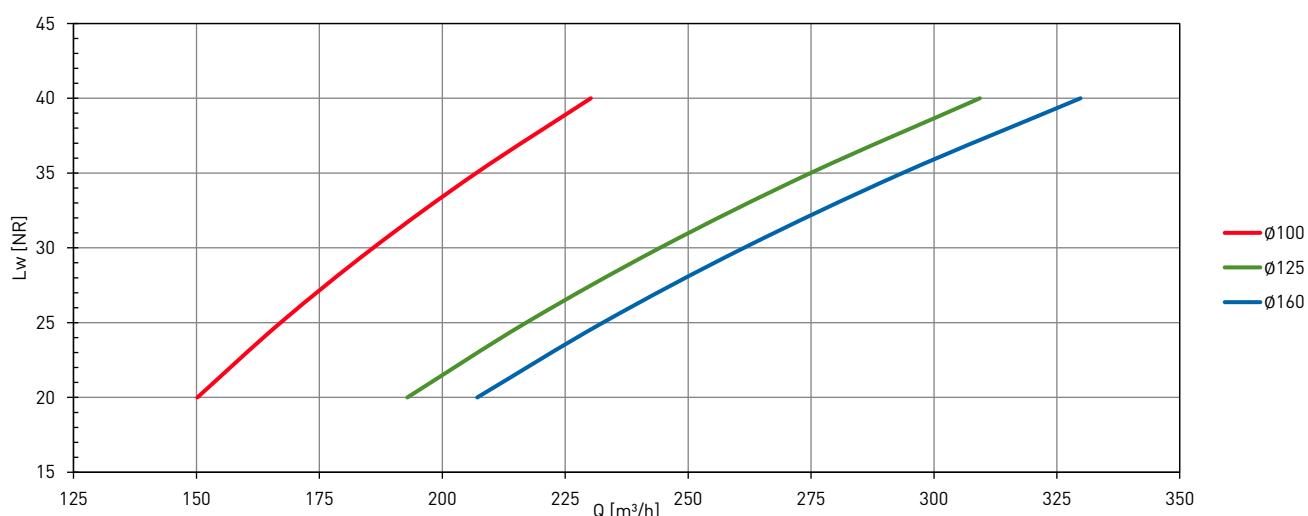
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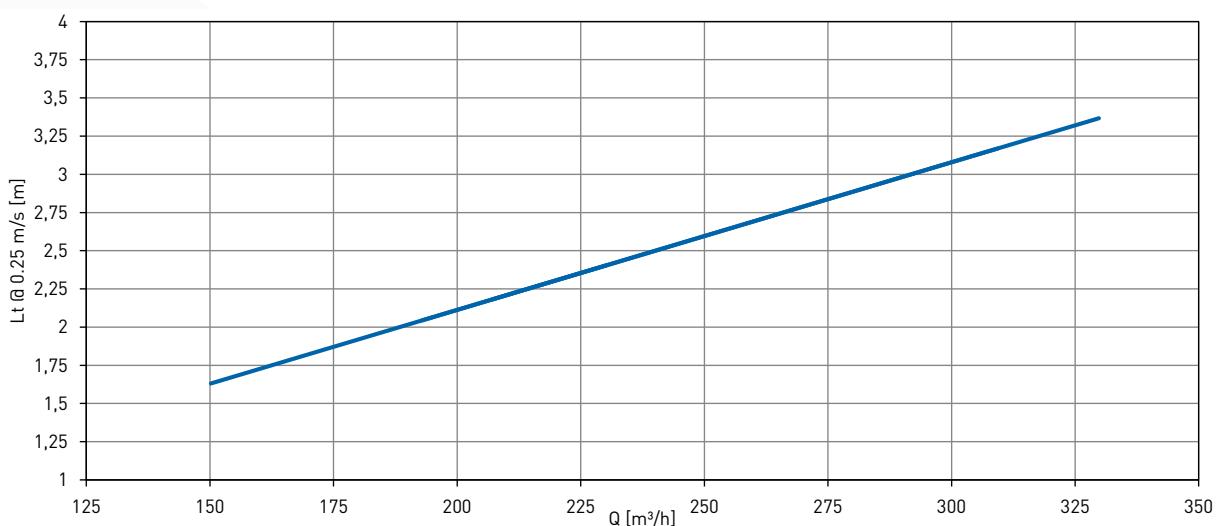
PRESSURE LOSS



SOUND GRAPH



THROW



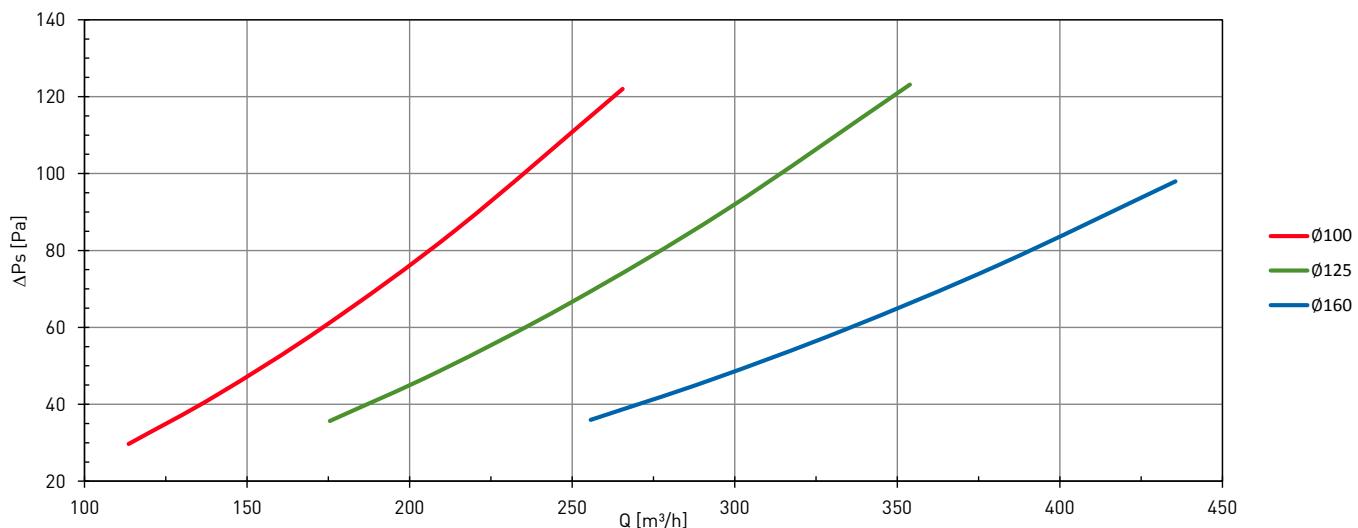
SELECTION GRAPHS TYPE 300

OPTION AV (EXTRACTION)

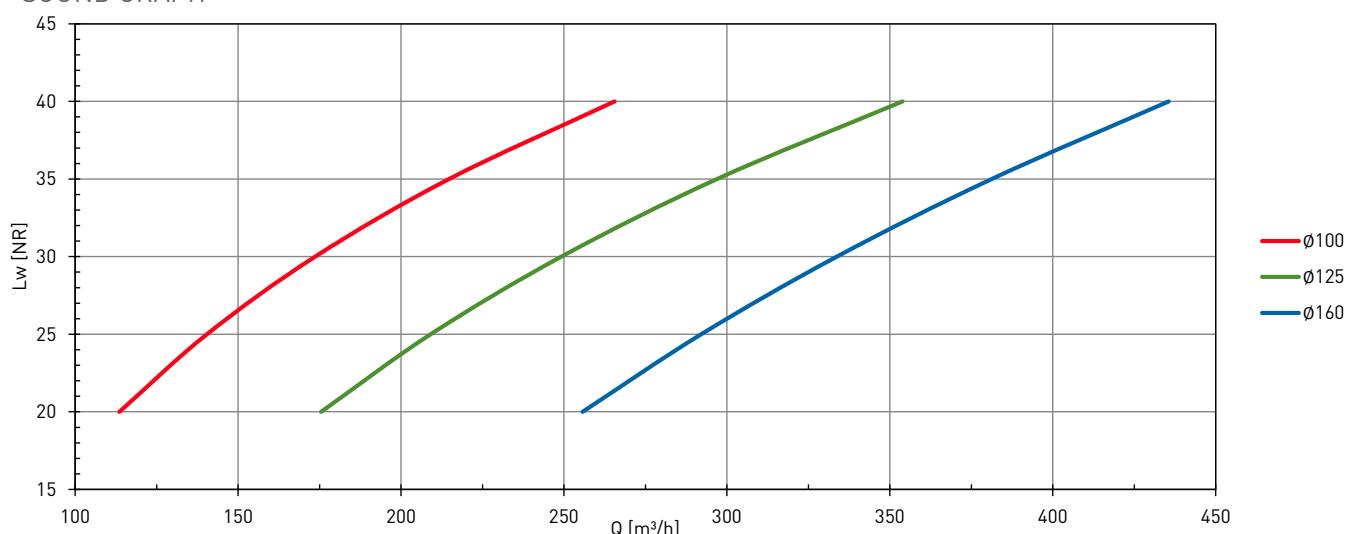
M	C	A	V	-	-	-	-	-	0	3	0	0
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PRESSURE LOSS



SOUND GRAPH



SELECTION CHARTS TYPE 300



QUICK SELECTION RA

Ø100	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	v0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	118,8	0,7	1,2	2,3	25,6	20	26,6
	135,2	0,8	1,3	2,6	33,0	25	30,6
	153,9	0,9	1,4	3,0	42,7	30	35,0
	175,3	0,9	1,6	3,4	55,1	35	39,7
	199,5	1,0	1,8	3,9	71,1	40	43,7
Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	v0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	139,1	0,8	1,3	2,7	25,6	20	26,6
	159,6	0,9	1,5	3,1	33,0	25	30,6
	183,2	1,0	1,7	3,5	42,7	30	35,0
	210,3	1,1	1,9	4,1	55,1	35	39,7
	241,4	1,2	2,1	4,7	71,1	40	43,7
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	v0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	145,3	0,8	1,4	2,8	25,6	20	26,5
	165,8	0,9	1,5	3,2	33,0	25	30,6
	189,3	1,0	1,7	3,7	42,7	30	35,0
	216,2	1,1	1,9	4,2	55,1	35	39,7
	246,8	1,2	2,1	4,8	71,1	40	43,7



QUICK SELECTION MN

Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	v0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
82,3	0,6	0,8	2,3	14,0	20	25,3
93,1	0,6	0,8	2,6	17,9	25	29,7
105,4	0,6	0,8	2,9	22,8	30	33,8
119,4	0,7	0,9	3,3	29,0	35	38,4
135,2	0,7	0,9	3,8	37,0	40	43,3

air flow angle relative to the ceiling: 42°

SELECTION CHARTS TYPE 300



QUICK SELECTION VD

Ø100	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	150,2	0,9	1,6	1,5	21,2	20	25,1
	167,1	1,0	1,8	1,7	26,4	25	29,7
	186,0	1,1	2,0	1,9	33,0	30	34,1
	206,9	1,2	2,2	2,1	41,1	35	38,1
	230,2	1,3	2,4	2,3	51,2	40	42,0
Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	192,9	1,1	2,0	1,9	21,2	20	25,1
	217,1	1,2	2,3	2,2	26,4	25	29,7
	244,3	1,4	2,5	2,5	33,0	30	34,1
	274,9	1,5	2,8	2,8	41,1	35	38,1
	309,3	1,7	3,2	3,1	51,2	40	42,0
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	207,1	1,2	2,2	2,1	21,2	20	25,1
	232,7	1,3	2,4	2,3	26,4	25	29,7
	261,4	1,4	2,7	2,6	33,0	30	34,1
	293,6	1,6	3,0	3,0	41,1	35	38,1
	329,8	1,8	3,4	3,3	51,2	40	42,0

QUICK SELECTION AV

Ø100	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	113,6	29,7	20	24,4
	140,5	42,3	25	29,3
	173,7	60,2	30	34,2
	214,7	85,7	35	39,3
	265,5	122,0	40	44,4
Ø125	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	175,5	35,7	20	25,9
	209,1	48,6	25	30,9
	249,2	66,3	30	36,2
	297,0	90,3	35	40,9
	353,9	123,1	40	44,9
Ø160	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	255,7	36,0	20	26,5
	292,1	46,2	25	30,9
	333,7	59,3	30	35,2
	381,3	76,2	35	39,3
	435,6	98,0	40	43,7

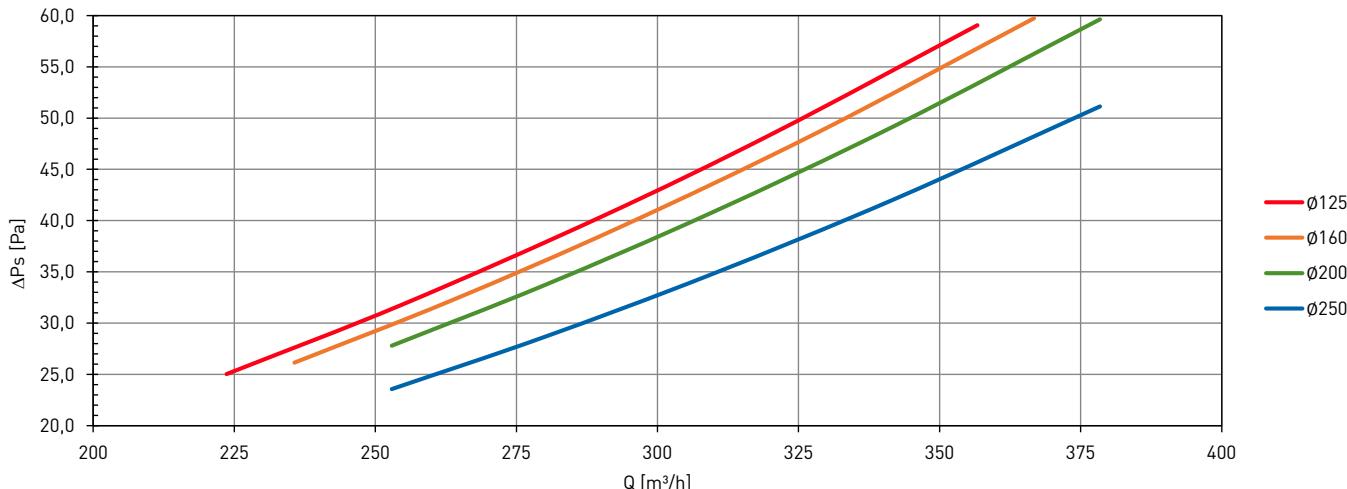




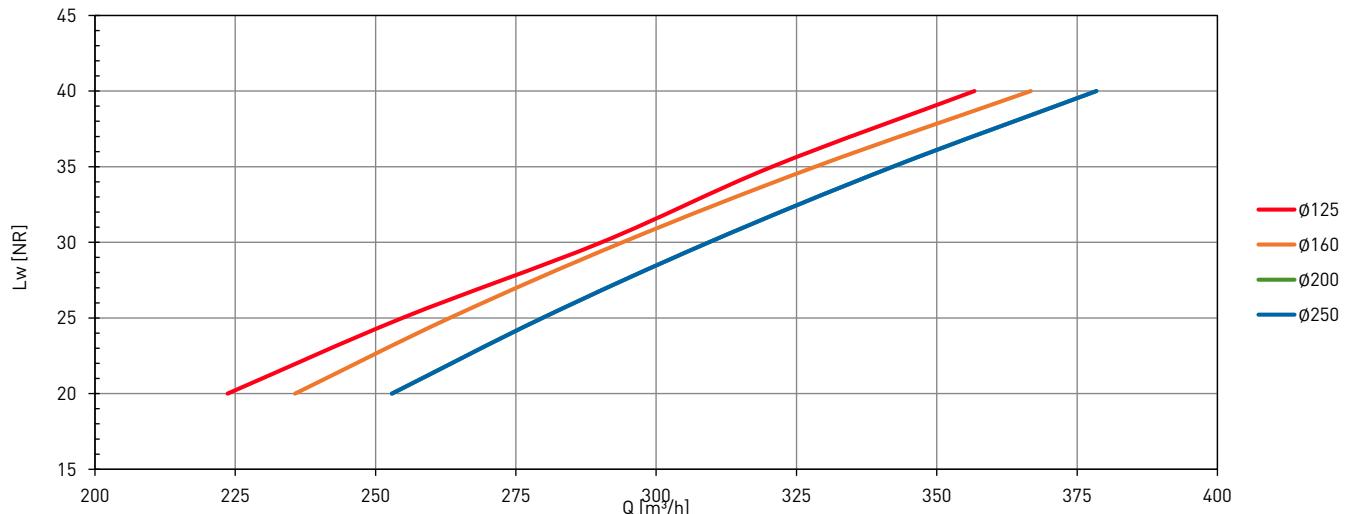
**SELECTION GRAPHS TYPE 600
OPTION RA (RADIAL AIR FLOW PATTERN - SMALL DEFLECTOR)**

M C R A - - - - - 0 6 0 0

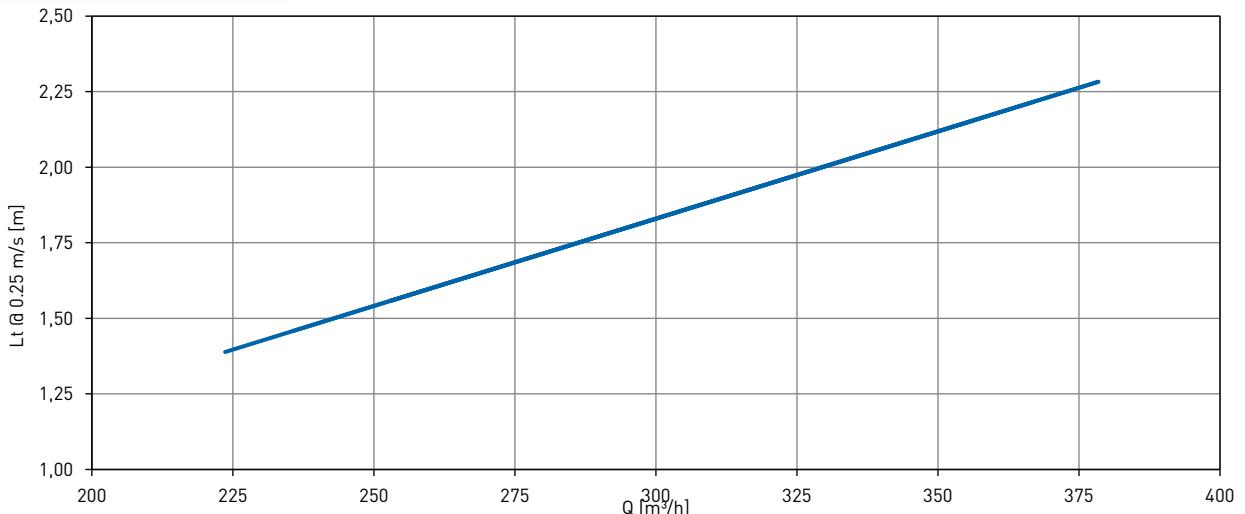
DRUKVERLIES



GELUIDSGRAFIEK



WORP

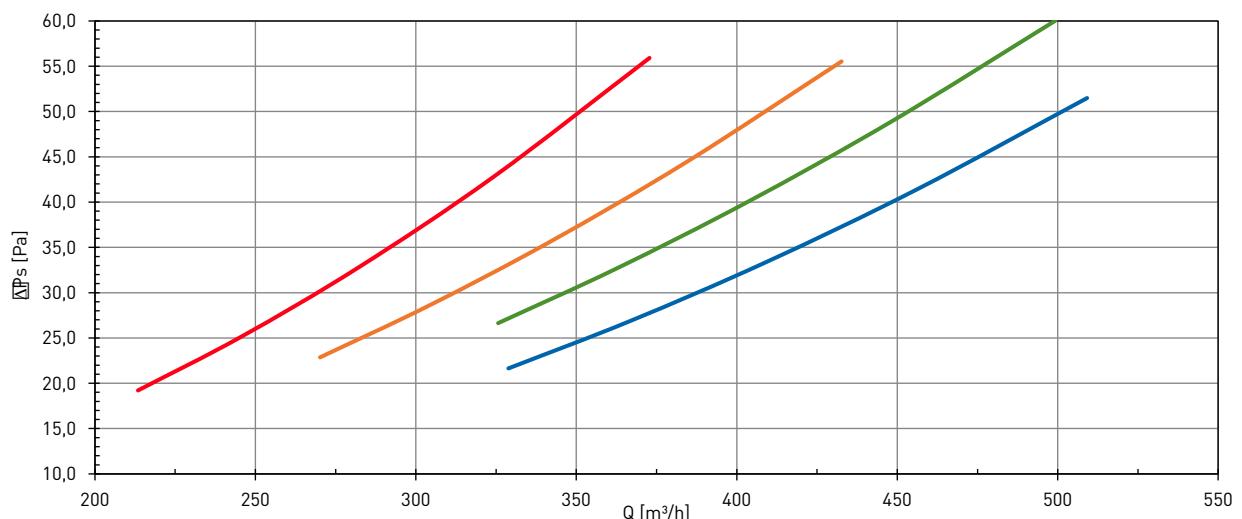




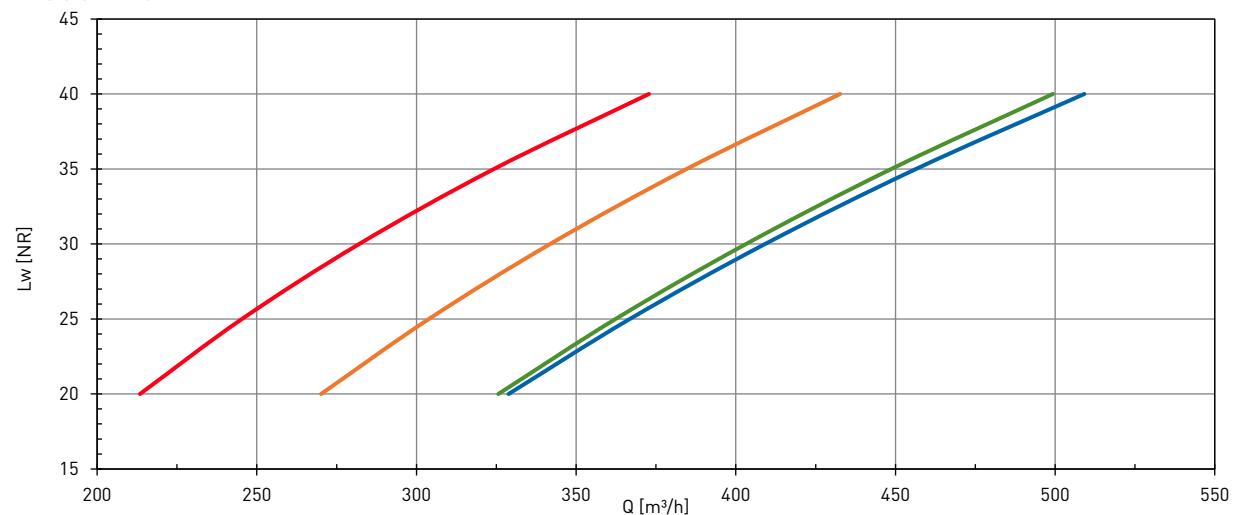
**SELECTION GRAPHS TYPE 600
OPTION RB (RADIAL AIR FLOW PATTERN - MEDIUM DEFLECTOR)**

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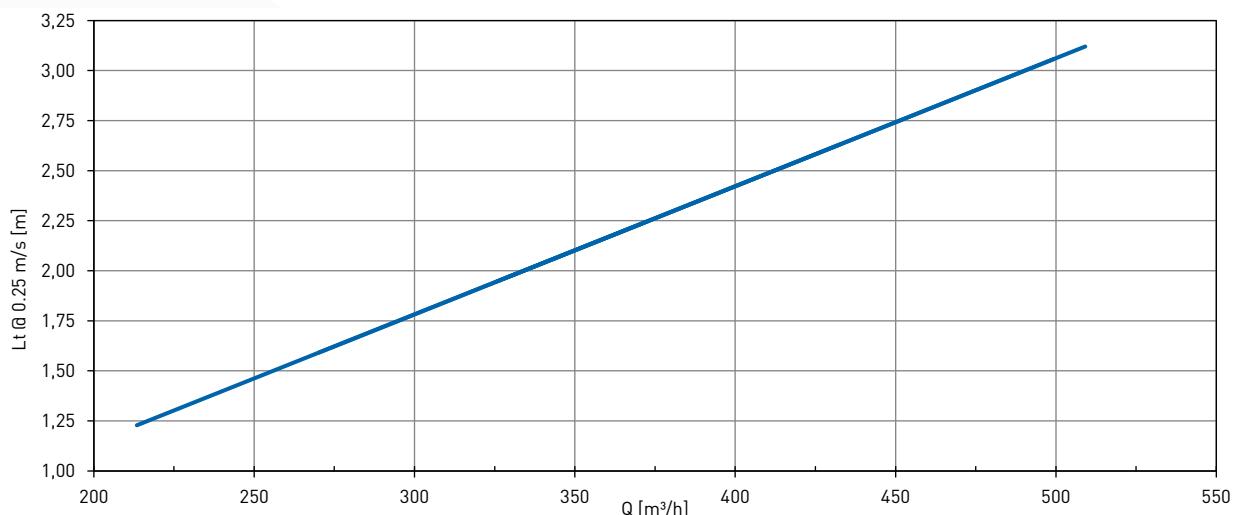
PRESSURE LOSS



SOUND GRAPH



THROW

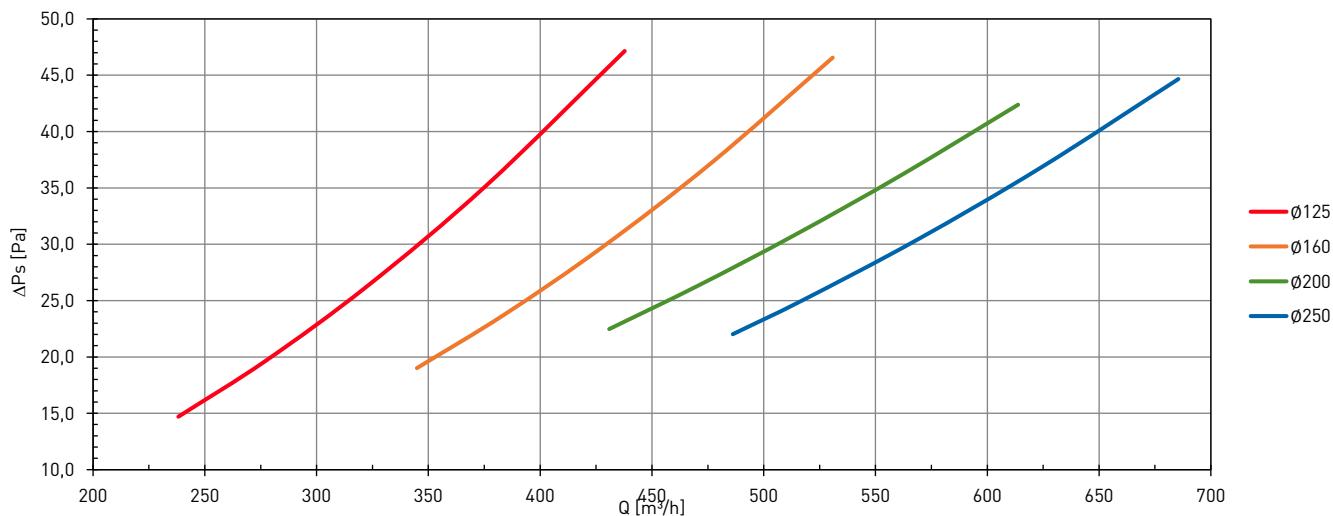


**SELECTION GRAPHS TYPE 600
OPTION RC (RADIAAL AIR FLOW PATTERN - LARGE DEFLECTOR)**

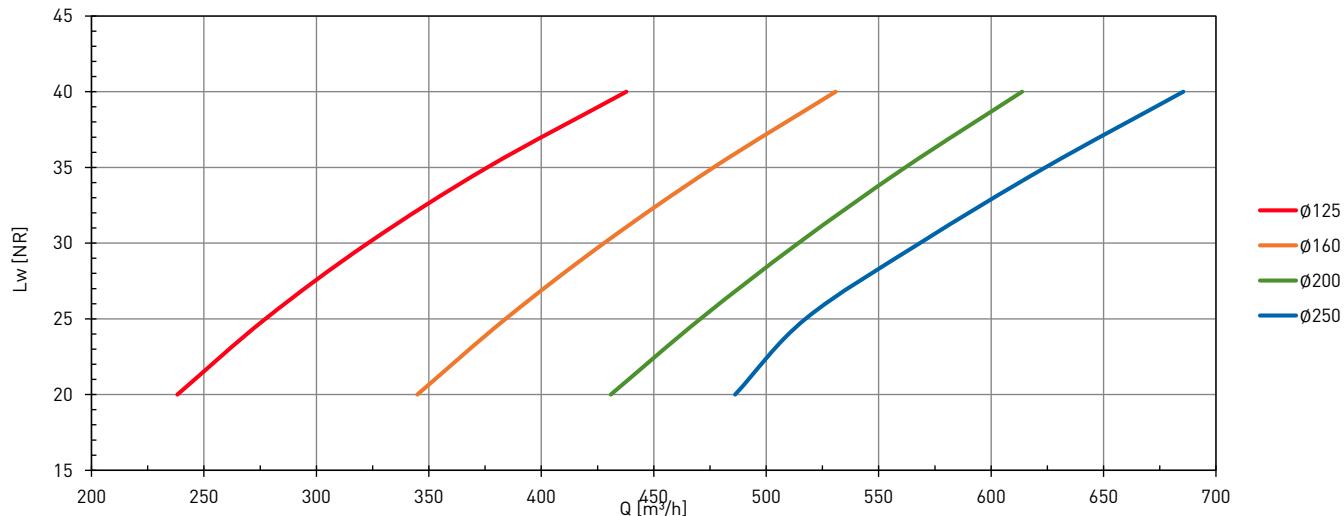
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---	---	---	---	---	---	---	---	---	---	---	---	---



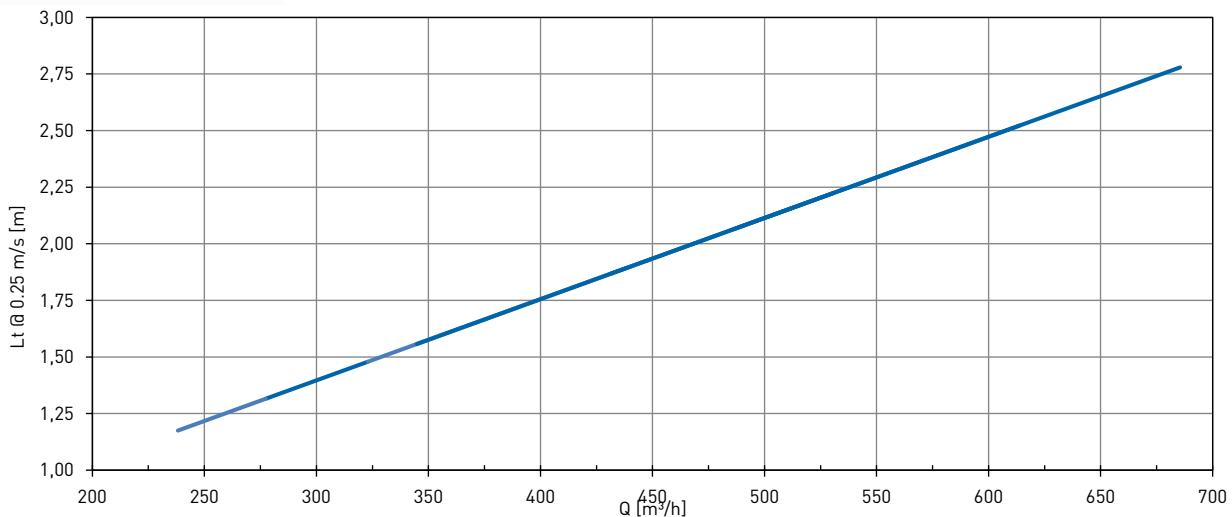
PRESSURE LOSS



SOUND GRAPH

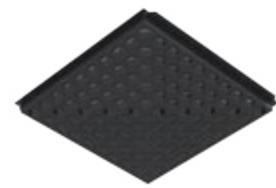


THROW

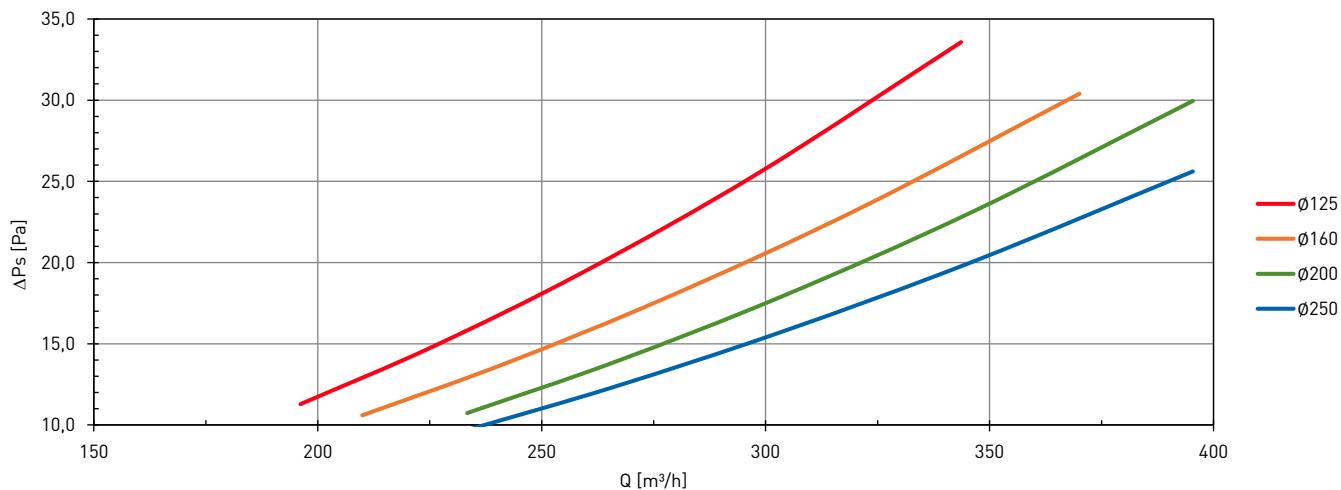


**SELECTION GRAPHS TYPE 600
OPTION MN (MULTI DIRECTIONAL AIR FLOW PATTERN)**

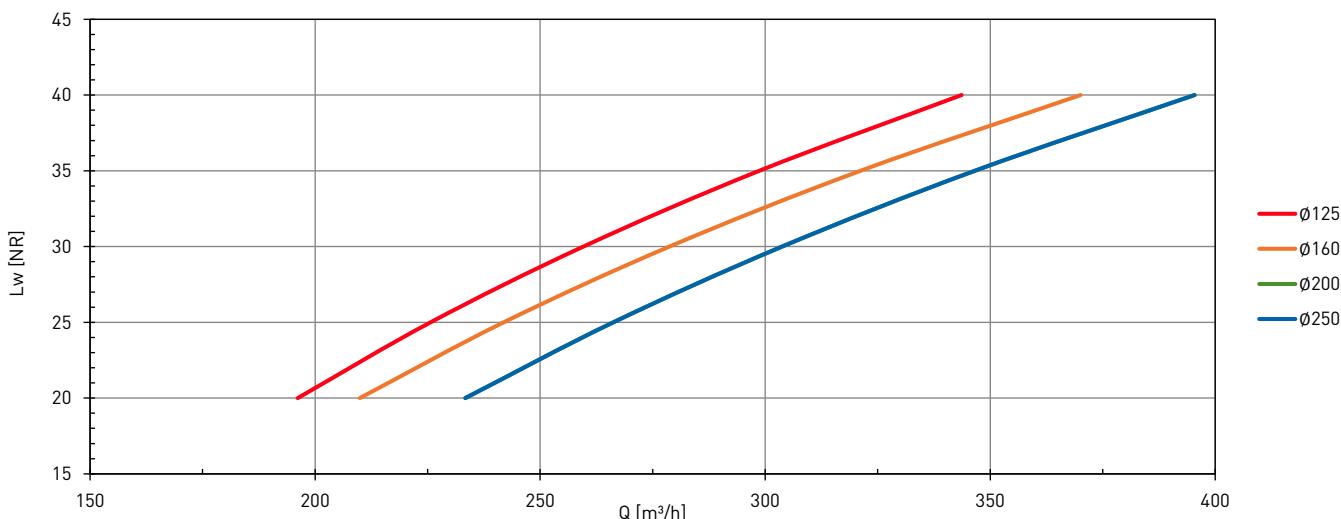
M	C	M	N	-	-	-	-	-	0	6	0	0
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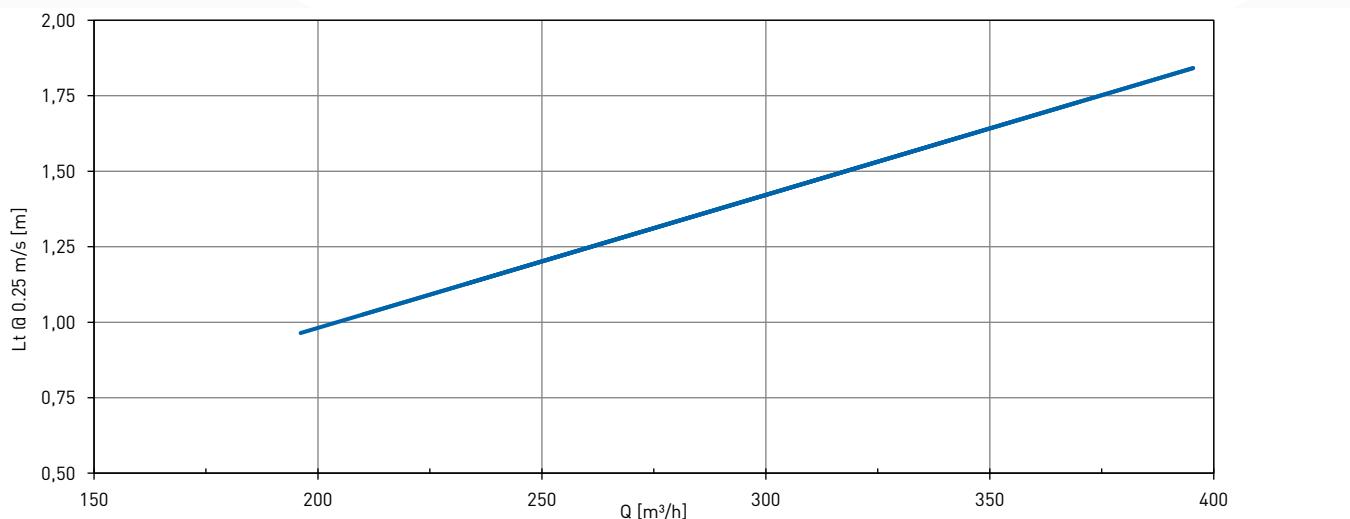
PRESSURE LOSS



SOUND GRAPH



THROW



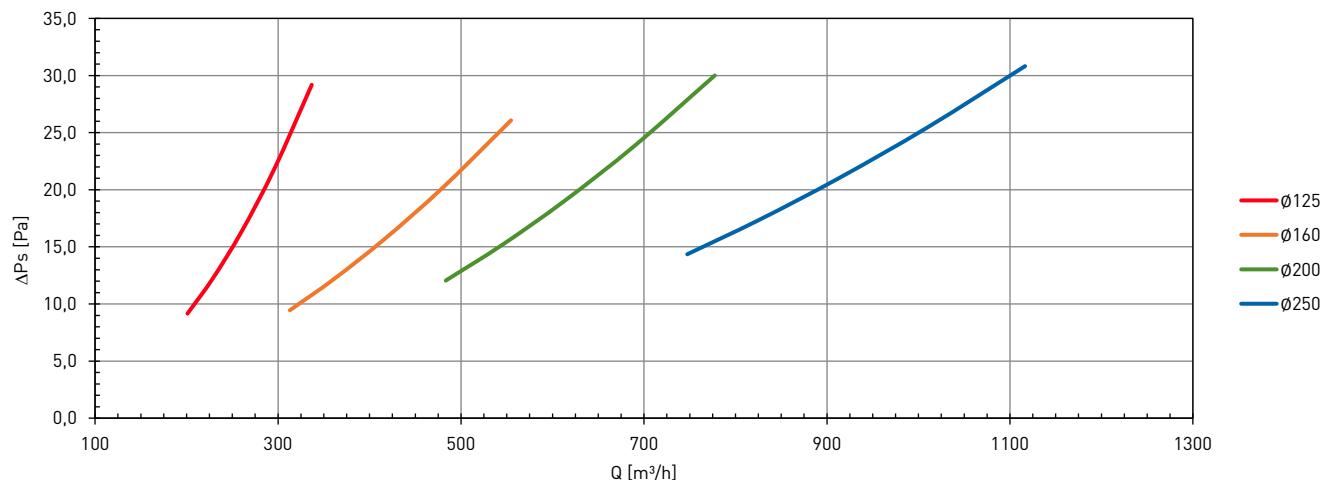


SELECTION GRAPHS TYPE 600

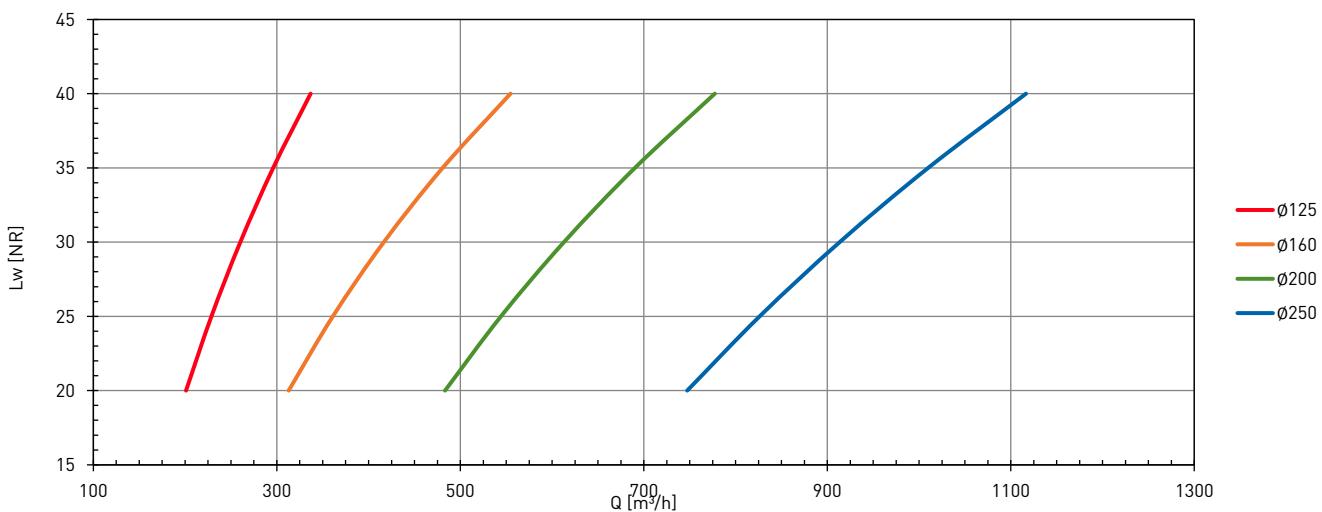
OPTION VD (DISPLACEMENT)

M C V D - - - - - 0 6 0 0

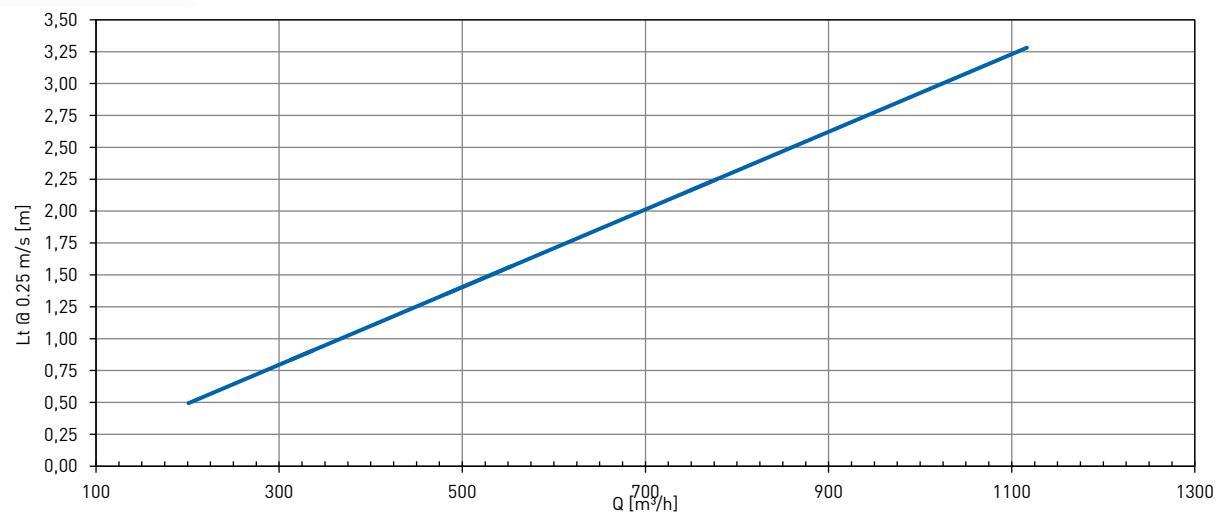
PRESSURE LOSS



SOUND GRAPH



THROW

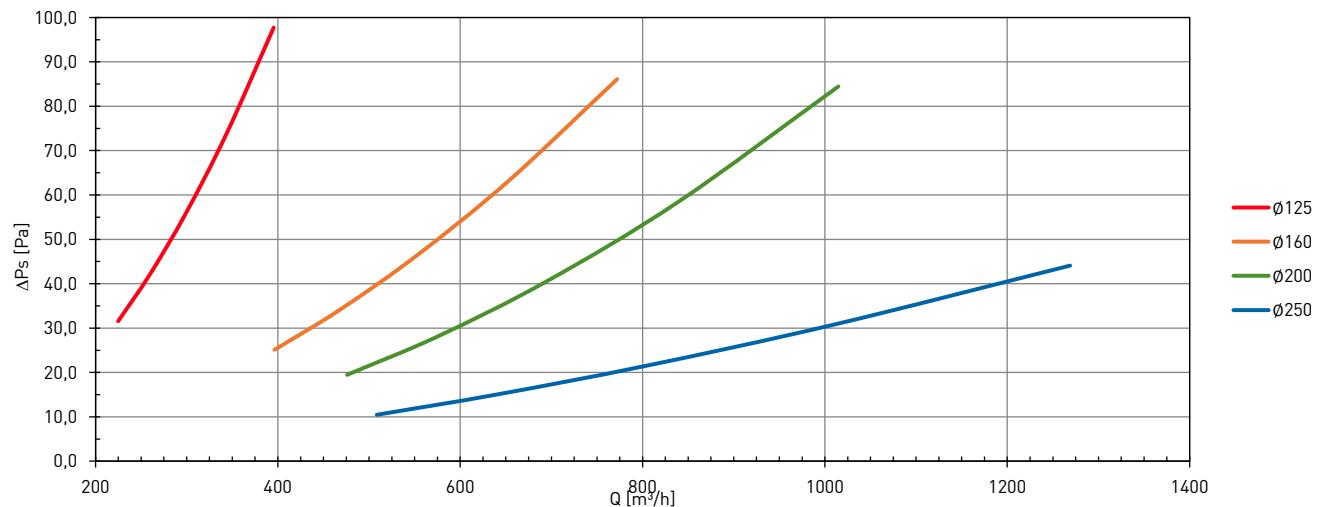




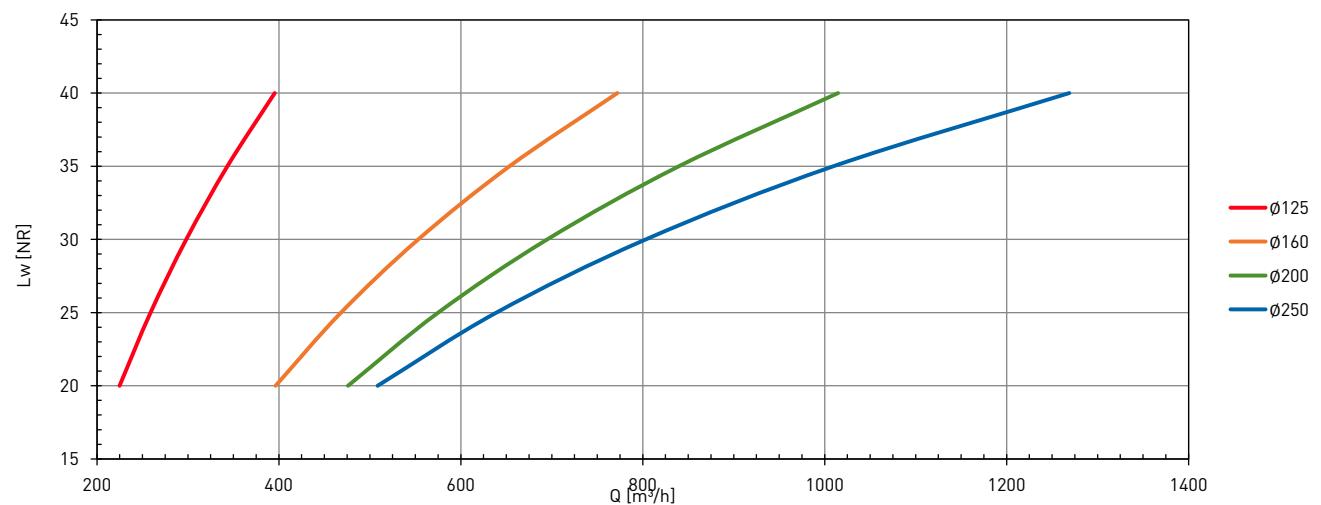
**SELECTION GRAPHS TYPE 600
OPTION AV (EXTRACTION)**

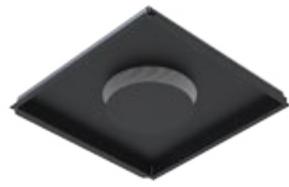
M C A V - - - - - 0 6 0 0

PRESSURE LOSS



SOUND GRAPH





SELECTION CHARTS TYPE 600

QUICK SELECTION RA

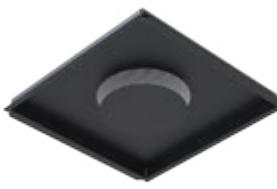
Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
Ø125	223,6	0,7	1,4	1,2	25,0	20	27,4
	254,8	0,8	1,6	1,4	31,8	25	31,5
	290,3	0,9	1,8	1,6	40,4	30	36,2
	320,7	1,0	1,9	1,7	48,6	35	40,2
	356,7	1,1	2,2	1,9	59,1	40	44,3
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
Ø160	235,7	0,8	1,5	1,3	26,1	20	26,9
	263,2	0,9	1,6	1,4	32,1	25	31,2
	294,0	0,9	1,8	1,6	39,5	30	35,5
	328,4	1,0	2,0	1,8	48,6	35	39,5
	366,7	1,2	2,2	2,0	59,7	40	43,6
Ø200	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
Ø200	252,9	0,8	1,6	1,4	27,8	20	25,6
	279,7	0,9	1,7	1,5	33,6	25	29,8
	309,4	1,0	1,9	1,7	40,7	30	34,3
	342,2	1,1	2,1	1,9	49,3	35	38,6
	378,4	1,2	2,3	2,1	59,6	40	43,0
Ø250	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
Ø250	252,9	0,8	1,6	1,4	23,6	20	25,6
	279,7	0,9	1,7	1,5	28,6	25	29,8
	309,4	1,0	1,9	1,7	34,7	30	34,3
	342,2	1,1	2,1	1,9	42,1	35	38,6
	378,4	1,2	2,3	2,1	51,1	40	43,0



SELECTION CHARTS TYPE 600

QUICK SELECTION RB

Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	213,4	0,5	1,2	1,0	19,2	20	26,4
	245,4	0,6	1,4	1,1	25,1	25	30,8
	282,1	0,8	1,7	1,3	32,8	30	36,1
	324,3	0,9	1,9	1,4	42,8	35	40,3
	372,8	1,1	2,2	1,7	55,9	40	44,4
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	270,1	0,7	1,6	1,2	22,9	20	26,4
	303,9	0,8	1,8	1,4	28,5	25	30,5
	341,9	1,0	2,1	1,5	35,6	30	35,0
	384,6	1,1	2,3	1,7	44,5	35	39,1
	432,7	1,2	2,6	1,9	55,5	40	43,0
Ø200	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	325,6	0,9	1,9	1,5	26,6	20	26,0
	362,4	1,0	2,2	1,6	32,6	25	30,3
	403,2	1,2	2,4	1,8	40,0	30	35,1
	448,7	1,3	2,7	2,0	49,0	35	39,5
	499,3	1,5	3,1	2,2	60,0	40	43,7
Ø250	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	328,8	0,9	2,0	1,5	21,6	20	23,3
	366,8	1,0	2,2	1,6	26,9	25	27,9
	409,2	1,2	2,5	1,8	33,4	30	32,5
	456,4	1,3	2,8	2,0	41,5	35	37,5
	509,1	1,5	3,1	2,3	51,5	40	42,3



SELECTION CHARTS TYPE 600

QUICK SELECTION RC

Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	238,2	0,7	1,2	0,8	14,7	20	26,8
	277,3	0,8	1,3	0,9	19,7	25	30,8
	322,9	0,9	1,5	1,0	26,3	30	35,3
	376,0	1,0	1,7	1,2	35,2	35	40,1
	437,8	1,1	1,9	1,4	47,1	40	44,8
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	344,9	0,9	1,6	1,1	19,0	20	26,8
	384,1	1,0	1,7	1,2	23,8	25	30,8
	427,9	1,1	1,9	1,4	29,7	30	35,4
	476,6	1,2	2,0	1,5	37,2	35	38,8
	530,8	1,3	2,2	1,7	46,6	40	43,0
Ø200	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	430,9	1,1	1,9	1,4	22,5	20	26,3
	470,7	1,2	2,0	1,5	26,3	25	30,1
	514,3	1,2	2,2	1,6	30,9	30	34,5
	561,8	1,3	2,3	1,8	36,2	35	38,1
	613,8	1,4	2,5	2,0	42,4	40	42,2
Ø250	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V0 [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	486,2	1,2	2,1	1,6	22,0	20	27,5
	517,5	1,2	2,2	1,7	25,0	25	30,8
	568,3	1,3	2,4	1,8	30,4	30	35,3
	624,1	1,4	2,6	2,0	36,8	35	39,2
	685,4	1,5	2,8	2,2	44,7	40	43,7



SELECTION CHARTS TYPE 600

QUICK SELECTION MN

Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	196,1	0,5	1,0	1,0	11,3	20	25,8
	225,6	0,6	1,1	1,2	14,8	25	30,4
	259,6	0,7	1,2	1,3	19,5	30	34,8
	298,7	0,8	1,4	1,5	25,6	35	39,0
	343,6	0,9	1,6	1,8	33,6	40	43,8
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	209,9	0,6	1,0	1,1	10,6	20	25,1
	241,9	0,6	1,2	1,2	13,8	25	29,5
	278,7	0,7	1,3	1,4	17,9	30	34,5
	321,2	0,8	1,5	1,6	23,4	35	38,6
	370,1	0,9	1,7	1,9	30,4	40	43,2
Ø200	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	233,4	0,6	1,1	1,2	10,7	20	26,0
	266,3	0,7	1,3	1,4	13,9	25	29,8
	303,8	0,8	1,4	1,6	17,9	30	34,6
	346,6	0,9	1,6	1,8	23,2	35	38,6
	395,4	1,0	1,8	2,0	30,0	40	42,9
Ø250	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	233,4	0,6	1,1	1,2	9,7	20	26,0
	266,3	0,7	1,3	1,4	12,4	25	29,8
	303,8	0,8	1,4	1,6	15,8	30	34,6
	346,6	0,9	1,6	1,8	20,1	35	38,6
	395,4	1,0	1,8	2,0	25,6	40	42,9



SELECTION CHARTS TYPE 600

QUICK SELECTION VD

Ø125	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	223,6	0,7	1,4	1,2	25,0	20	27,4
	254,8	0,8	1,6	1,4	31,8	25	31,5
	290,3	0,9	1,8	1,6	40,4	30	36,2
	320,7	1,0	1,9	1,7	48,6	35	40,2
	356,7	1,1	2,2	1,9	59,1	40	44,3
Ø160	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	235,7	0,8	1,5	1,3	26,1	20	26,9
	263,2	0,9	1,6	1,4	32,1	25	31,2
	294,0	0,9	1,8	1,6	39,5	30	35,5
	328,4	1,0	2,0	1,8	48,6	35	39,5
	366,7	1,2	2,2	2,0	59,7	40	43,6
Ø200	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	252,9	0,8	1,6	1,4	27,8	20	25,6
	279,7	0,9	1,7	1,5	33,6	25	29,8
	309,4	1,0	1,9	1,7	40,7	30	34,3
	342,2	1,1	2,1	1,9	49,3	35	38,6
	378,4	1,2	2,3	2,1	59,6	40	43,0
Ø250	Q [M³/H]	LT @ 0,5M/S [M]	LT @ 0,25M/S [M]	V₀ [M/S]	DPS [PA] PULSIE	LW [NR]	LW [DB(A)]
	252,9	0,8	1,6	1,4	23,6	20	25,6
	279,7	0,9	1,7	1,5	28,6	25	29,8
	309,4	1,0	1,9	1,7	34,7	30	34,3
	342,2	1,1	2,1	1,9	42,1	35	38,6
	378,4	1,2	2,3	2,1	51,1	40	43,0

SELECTION CHARTS TYPE 600



QUICK SELECTION AV

Ø125	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	224,9	31,6	20	26,6
	258,9	41,9	25	31,4
	298,2	55,5	30	35,9
	343,4	73,7	35	39,9
	395,4	97,7	40	43,9
Ø160	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	396,4	25,1	20	24,6
	468,3	34,2	25	29,1
	553,2	46,5	30	33,7
	653,6	63,3	35	38,3
	772,1	86,1	40	43,0
Ø200	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	476,0	19,5	20	26,2
	575,2	28,1	25	31,0
	695,0	40,6	30	36,0
	839,8	58,5	35	41,2
	1014,7	84,4	40	45,7
Ø250	Q [M³/H]	DPS [PA]	LW [NR]	LW [DB(A)]
	508,6	10,5	20	25,6
	639,2	15,0	25	30,3
	803,3	21,5	30	34,9
	1009,6	30,8	35	39,7
	1268,9	44,1	40	44,3