

CIRCULAR SILENCERS

OPTIMUM RANGE

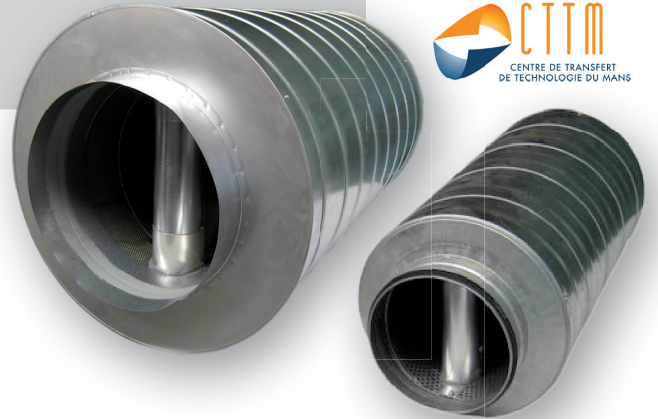
Designed for high acoustic requirements, the OPTIMUM range circular silencers are equipped with a central attenuator (acoustic splitter type).

Their acoustic and aeraulic performances have been tested and approved by an independent laboratory, the Centre de Transfert de Technologie du Mans, according to the European standard ISO 7235:2009.

This new range has been developed on these certified results and offers the best compromise between attenuations, regenerations and pressure losses.

Delivery time
1 week
exworks*

Tests carried out by an
independent laboratory



OPTIMUM 50 Silencer with a 50 mm-thick soundproofing casing and equipped with a central attenuator (splitter)

OPTIMUM 100 Silencer with a 100 mm-thick soundproofing casing and equipped with a central attenuator (splitter)

CONSTRUCTION

		Characteristics	Options	
			OPTIMUM 50	OPTIMUM 100
Casing	Material	Rolled-stapled or spiral galvanized steel duct (depending on diameter)		Stainless steel, painted steel or aluminium
	Connection	Smooth fittings		Threaded flanges, revolving flanges
Soundproofing	Material	Mineral wool with anti-erosion fiberglass layer on the surface Euroclasse A1 fire classification	Fiberglass fabric protection	
	Protection	Perforated steel sheet in the air flow	Anti-erosion: spread metal sheet on both side of the central splitter	
Accessories			Protective guards Support legs	

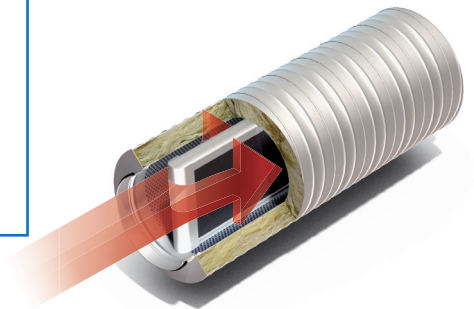
SPECIFICATIONS

Circular silencers composed of:

- a 50 or 100 mm-thick soundproofing casing protected by perforated steel sheet in the air flow,
- a central attenuator of splitter type with rounded aerodynamic edges.

The acoustic performances must have been tested by an independent laboratory according to the European standard ISO 7235:2009.

OPTIMUM type, F2A brand.



* The delivery time is valid for standard silencers from Ø125 to Ø500 mm and within the limit of available stock.

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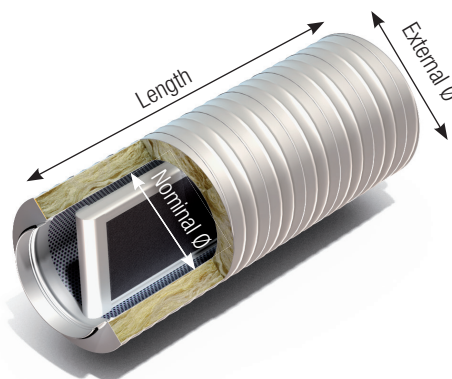
F2A
Manufacturer
Air handling components

CIRCULAR SILENCERS

OPTIMUM RANGE

DIMENSIONS

OPTIMUM 50				
Nominal Ø (mm)	External Ø (mm)	Length (mm)	Splitter thickness (mm)	Weight (kg)
125	225	600	50	6
		900		9
160	250	600	50	7
		900		11
200	315	600	50	9
		900		14
250	355	600	50	10
		900		16
315	400	600	50	12
		900		17
355	450	900	50	20
400	500	900	100	24
450	560	900	100	27
500	630	900	100	35



ACOUSTIC PERFORMANCES



OPTIMUM 50

Soundproofing casing thickness = 50 mm

		Static attenuations (dB)							
Nominal Ø (mm)	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
125	600	2	6	11	17	28	41	46	25
	900	3	7	18	25	43	48	49	25
160	600	2	4	8	15	24	36	39	26
	900	2	5	11	21	39	48	48	29
200	600	2	4	7	12	24	37	27	19
	900	2	5	11	18	32	46	41	27
250	600	1	4	6	14	25	37	18	13
	900	4	5	11	20	31	39	29	15
315	600	1	2	4	11	20	27	13	12
	900	2	2	7	15	27	36	19	10
355	900	1	2	6	14	28	32	13	12
400	900	3	4	6	16	30	30	14	10
450	900	1	2	8	17	28	21	12	12
500	900	1	3	6	15	22	19	10	11

Results from tests carried out by an independent laboratory according to the European standard ISO 7235:2009.

CIRCULAR SILENCERS

OPTIMUM RANGE

1.3.2B

ACOUSTIC

OPTIMUM 50

Diameter and length (mm)	Regenerations and Pressure losses										
	Air velocity*	63	125	250	500	1000	2000	4000	8000	Hz	Pressure losses (Pa)
Ø125 L600	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	6
	5m/s	46	37	34	32	25	19	24	30	dB	17
	7m/s	56	48	41	39	35	28	25	30	dB	34
	10m/s	65	60	50	46	44	38	32	30	dB	70
	13m/s	65	63	54	48	45	42	36	31	dB	118
Ø125 L900	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	9
	5m/s	37	32	29	24	18	20	26	32	dB	24
	7m/s	50	44	40	37	31	24	26	32	dB	47
	10m/s	58	55	49	45	41	35	29	32	dB	96
	13m/s	59	59	53	48	45	39	32	32	dB	162
Ø160 L600	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	5
	5m/s	41	34	30	27	20	19	25	31	dB	14
	7m/s	53	43	37	36	32	26	25	31	dB	27
	10m/s	58	53	45	42	40	36	30	31	dB	55
	13m/s	64	61	52	47	45	43	38	33	dB	94
Ø160 L900	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	5
	5m/s	42	33	29	26	21	19	25	31	dB	14
	7m/s	51	43	37	36	32	23	25	31	dB	28
	10m/s	61	51	44	43	40	33	28	31	dB	56
	13m/s	66	60	50	48	45	40	34	32	dB	95
Ø200 L600	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	3
	5m/s	43	35	29	27	22	20	25	31	dB	7
	7m/s	49	40	36	35	30	24	25	31	dB	14
	10m/s	56	49	42	41	39	34	28	31	dB	29
	13m/s	63	59	48	46	45	42	35	32	dB	48
Ø200 L900	3m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	3
	5m/s	40	33	30	27	21	18	24	30	dB	9
	7m/s	49	41	37	36	32	25	24	30	dB	17
	10m/s	57	49	44	43	41	36	29	30	dB	35
	13m/s	60	57	50	48	46	44	37	32	dB	60
Ø250 L600	5m/s	39	35	32	27	24	19	23	29	dB	5
	7m/s	50	47	43	44	41	33	27	31	dB	10
	10m/s	57	57	51	51	51	45	38	34	dB	20
	13m/s	63	64	57	57	57	54	48	43	dB	33
	16m/s	71	69	64	61	61	59	55	51	dB	50
Ø250 L900	5m/s	39	36	34	29	23	19	23	29	dB	6
	7m/s	55	48	43	39	32	24	27	31	dB	11
	10m/s	59	57	52	51	48	41	32	31	dB	23
	13m/s	67	62	60	58	57	52	44	35	dB	39
	16m/s	70	68	64	61	61	58	51	41	dB	59
Ø315 L600	5m/s	44	41	34	34	31	23	23	29	dB	6
	7m/s	53	47	41	43	41	34	28	31	dB	11
	10m/s	59	58	51	50	50	46	41	34	dB	22
	13m/s	65	63	56	55	56	53	50	44	dB	38
	16m/s	70	71	63	59	60	58	55	51	dB	57
Ø315 L900	5m/s	40	37	37	34	30	22	23	29	dB	6
	7m/s	57	49	46	43	37	29	27	31	dB	12
	10m/s	64	58	52	52	50	44	34	32	dB	24
	13m/s	68	64	58	57	57	53	45	35	dB	41
	16m/s	76	70	62	61	62	59	52	43	dB	62
Ø355 L900	5m/s	46	43	35	33	29	23	23	29	dB	7
	7m/s	54	49	43	42	38	33	27	31	dB	13
	10m/s	59	55	49	50	49	44	38	34	dB	26
	13m/s	62	61	55	56	56	53	48	43	dB	44
	16m/s	69	66	60	60	61	58	53	49	dB	67
Ø400 L900	5m/s	49	41	34	32	30	24	23	29	dB	7
	7m/s	59	54	48	44	39	30	28	31	dB	13
	10m/s	66	64	56	54	51	45	35	32	dB	27
	13m/s	71	69	62	60	58	54	46	37	dB	45
	16m/s	77	73	67	65	64	60	54	45	dB	69
Ø450 L900	5m/s	51	49	38	36	30	22	23	29	dB	7
	7m/s	54	53	46	45	39	32	26	31	dB	14
	10m/s	62	59	54	54	50	45	38	33	dB	29
	13m/s	68	64	59	60	57	53	47	40	dB	49
	16m/s	74	69	64	65	62	59	54	48	dB	74
Ø500 L900	5m/s	51	52	38	38	31	25	23	29	dB	7
	7m/s	59	54	43	43	39	35	29	31	dB	13
	10m/s	67	60	51	50	49	46	41	36	dB	27
	13m/s	73	66	57	56	56	55	50	45	dB	45
	16m/s	78	71	63	61	60	60	57	52	dB	68

*Air velocity in air sections

Results from tests carried out by an independent laboratory according to the European standard ISO 7235:2009.

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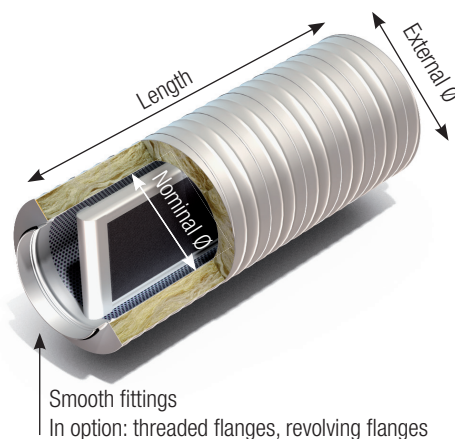
F2A
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CIRCULAR SILENCERS

OPTIMUM RANGE

DIMENSIONS

OPTIMUM 100				
Nominal Ø (mm)	External Ø (mm)	Length (mm)	Splitter thickness (mm)	Weight (kg)
250	450	1000	50	24
315	500	1000	50	26
355	560	1000	50	30
400	630	1000	100	37
450	630	1000	100	36
500	710	1000	100	47



ACOUSTIC PERFORMANCES



OPTIMUM 100

Soundproofing casing thickness = 100 mm

		Static attenuations (dB)							
Nominal Ø (mm)	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
250	1000	4	10	21	35	45	52	38	20
315	1000	2	5	16	24	35	48	24	17
355	1000	2	7	17	23	32	39	18	14
400	1000	2	7	18	25	36	33	17	13
450	1000	2	5	15	21	32	28	13	11
500	1000	2	6	15	21	28	22	10	9

		Regenerations and Pressure losses									
Diameter and length (mm)	Air velocity*	63	125	250	500	1000	2000	4000	8000	Hz	Pressure losses (Pa)
Ø250 L1000	5m/s	39	36	34	29	23	19	23	29	dB	5
	7m/s	50	46	45	42	39	34	27	31	dB	10
	10m/s	59	56	53	51	50	47	40	34	dB	21
	13m/s	67	63	59	56	56	55	50	43	dB	35
	16m/s	73	69	66	61	61	60	56	51	dB	53
Ø315 L1000	5m/s	40	37	37	34	30	22	23	29	dB	7
	7m/s	49	47	44	43	40	34	27	31	dB	14
	10m/s	58	56	52	51	49	46	39	33	dB	28
	13m/s	63	61	57	56	55	53	49	41	dB	48
	16m/s	68	67	61	60	60	59	55	49	dB	72
Ø355 L1000	5m/s	46	43	37	33	30	23	23	29	dB	4
	7m/s	52	47	43	40	39	34	27	31	dB	9
	10m/s	56	55	50	48	49	45	39	33	dB	18
	13m/s	62	60	55	54	55	53	48	41	dB	30
	16m/s	66	63	60	58	60	59	55	49	dB	45
Ø400 L1000	5m/s	49	41	34	32	30	24	23	29	dB	9
	7m/s	53	48	41	40	39	34	27	31	dB	17
	10m/s	59	55	48	47	48	46	39	33	dB	35
	13m/s	65	61	55	53	54	53	48	41	dB	60
	16m/s	72	64	59	58	59	58	55	49	dB	91
Ø450 L1000	5m/s	48	48	35	35	30	25	23	29	dB	6
	7m/s	51	50	42	41	39	35	28	31	dB	13
	10m/s	61	57	47	48	47	47	41	35	dB	26
	13m/s	65	63	53	53	53	53	50	44	dB	44
	16m/s	73	68	58	57	57	58	57	52	dB	66
Ø500 L1000	5m/s	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	dB	7
	7m/s	51	47	37	37	31	25	25	31	dB	13
	10m/s	56	54	43	43	40	37	31	31	dB	27
	13m/s	64	58	49	50	49	48	44	37	dB	46
	16m/s	71	65	56	55	55	55	52	47	dB	70

*Air velocity in air sections

Results from tests carried out by an independent laboratory according to the European standard ISO 7235:2009.