

FIRE DAMPER

RECTANGULAR FIRE DAMPER



MCR FID-C



MCR FID-P



FIRE DAMPER

Mercor Tecresa fire dampers have been specially designed to partition ducts that pass through different fire sectors, following the current regulations on fire protection in buildings. In addition, mcr FID valves are CE marked in accordance with Regulation 305/2011 / EU.v

APPLICATION

- The rectangular fire dumper mcr FID-C and mcr FID-P have been designed to be integrated in general ventilation systems, where those systems pass through construction partitions, both vertically and horizontally.
- In the event of a fire, the damper prevents the spreading of fire, flames and smoke through the ventilation ducts. The adjoining zone of the ventilation system remains isolated.
- In normal operation, the damper blade is open, in the event of a fire, the damping blade closes to prevent the fire from spreading to the adjacent room.

REGULATIONS

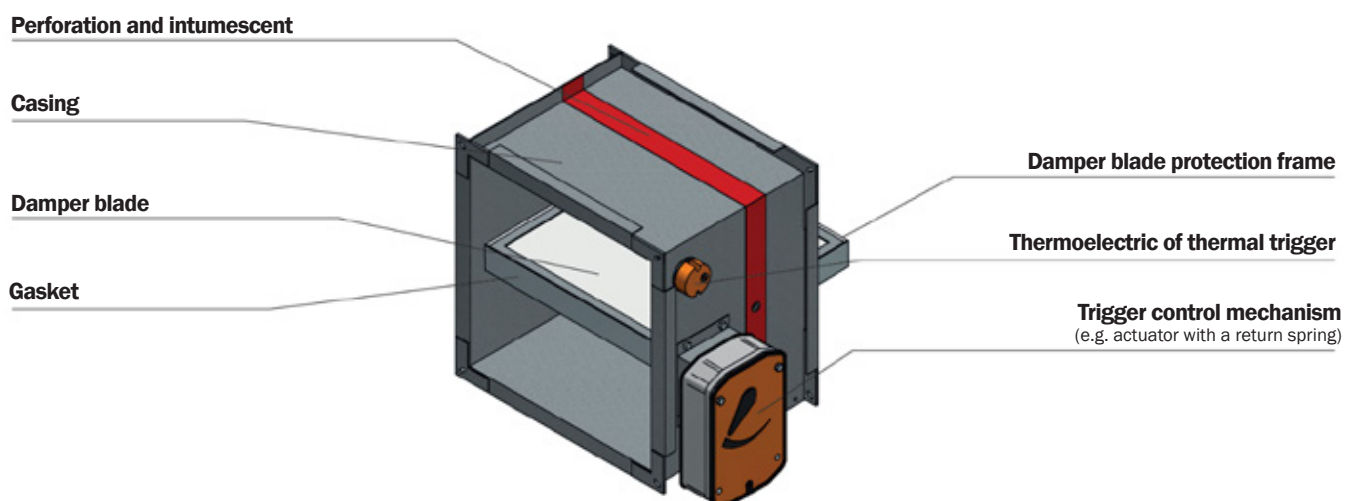
- Fire resistance EIS120 (E=Integrity, I= Thermal insulation, S = Smoke tightness).
- Fire dampers are certified according to standard **EN 15650** (Ventilation for buildings - Fire dampers), according to standard **EN 13501-3** (Fire classification of construction products and building elements - Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers) and in accordance with standard **EN 1366-2** (Fire resistance tests for service installations - Part 2: Fire dampers).
- CE marking with certificates according to models: mcr-FID-C (**1488-CPD-0203/W, 1396-CPR-0114**). and mcr-FID-P (**1488-CPR-0442/W, 1396-CPR-0103**)

FIRE DAMPER

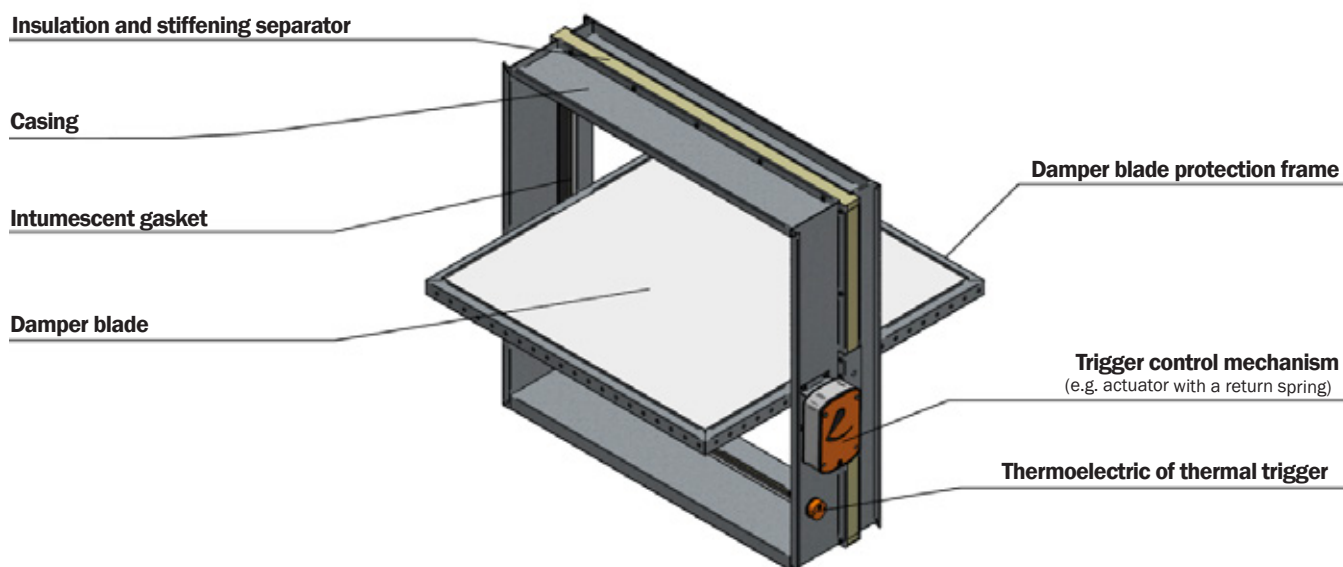
RECTANGULAR FIRE DAMPER

DESIGN

RECTANGULAR FIRE DAMPER “mcr FID C”



RECTANGULAR FIRE DAMPER “mcr FID P”



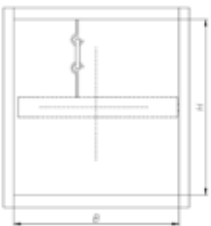
FIRE DAMPER

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THE TRIGGER MECHANISM

In addition to the manual actuation mechanism, fire dampers may be supplied with electrical mechanisms. In these cases, the damper is able to operate by means of a double system: by means of a thermal fuse or by means of an electro-mechanical drive.

Types of drive:

DISPOSITIVE	DESCRIPTION
	RST Thermal trigger
	RST / WK1 Thermal trigger + limit switch (closed blade signal)
	RST / WK2 Thermal trigger + limit switch (open/closed blade signal)
	RST-KW1/S Thermal trigger
	RST-KW1/S/WK2 Thermal trigger + limit switch (open/closed blade signal)
	RST-KW1/24I Thermal trigger + "pulse" electromagnetic trigger, U = 24 V DC and a limit switch (closed/open partition signalling)
	RST-KW1/24P Thermal trigger + "break" electromagnetic trigger, U = 24 V DC and a limit switch (closed/open partition signalling)
	RST-KW1/230I Thermal trigger + "pulse" electromagnetic trigger, U = 230 V AC and a limit switch (closed/open partition signalling)
	RST-KW1/230P Thermal trigger + "break" electromagnetic trigger, U = 230 V AC and a limit switch (closed/open partition signalling)
	BLF24-T Belimo actuator with a return spring, U = 24 V AC/DC
	BFL230-T Belimo actuator with a return spring, U = 230 V AC
	BFN24-T Belimo actuator with a return spring, U = 24 V AC/DC
	BFN230-T Belimo actuator with a return spring, U = 230 V AC
	BFL24-T Belimo actuator with a return spring, U = 24 V AC/DC .
	BFL230-T Belimo actuator with a return spring, U = 230 V AC

FIRE DAMPER

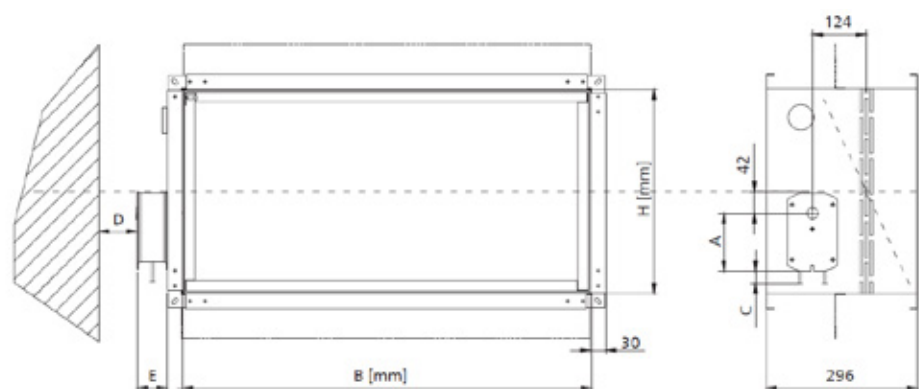
RECTANGULAR FIRE DAMPER

DIMENSIONS

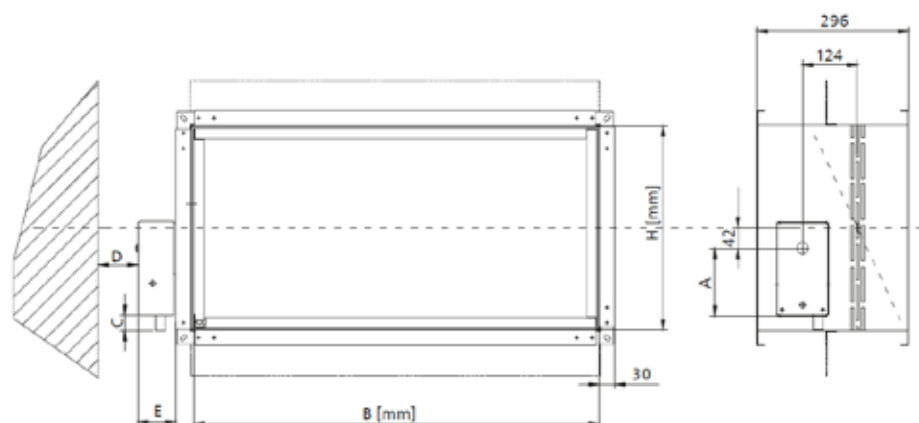
RECTANGULAR FIRE DAMPER “mcr FID C”

- Nominal width B: from 200 mm. to 800 mm.
- Nominal height H: from 800 mm. to 400 mm.
- Maximum surface area through the door up to 0.32 m².

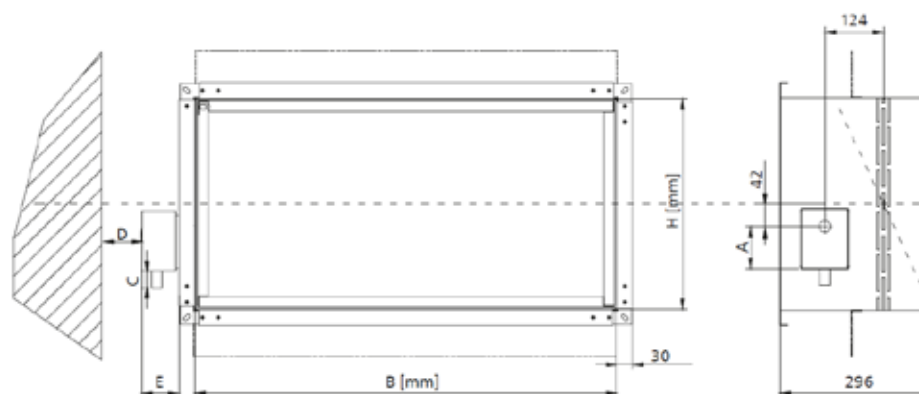
Dimensions depends on the mechanism used:



MECHANISM	A	C	D	E
RST	50	30	75	70



MECHANISM	A	C	D	E
RST - KW1	130	30	75	80



MECHANISM	A	C	D	E
BLF	50	30	75	70
BFN	157	30	75	57
BLF	138	30	75	53
EXBF	225	55	75	175

FIRE DAMPER

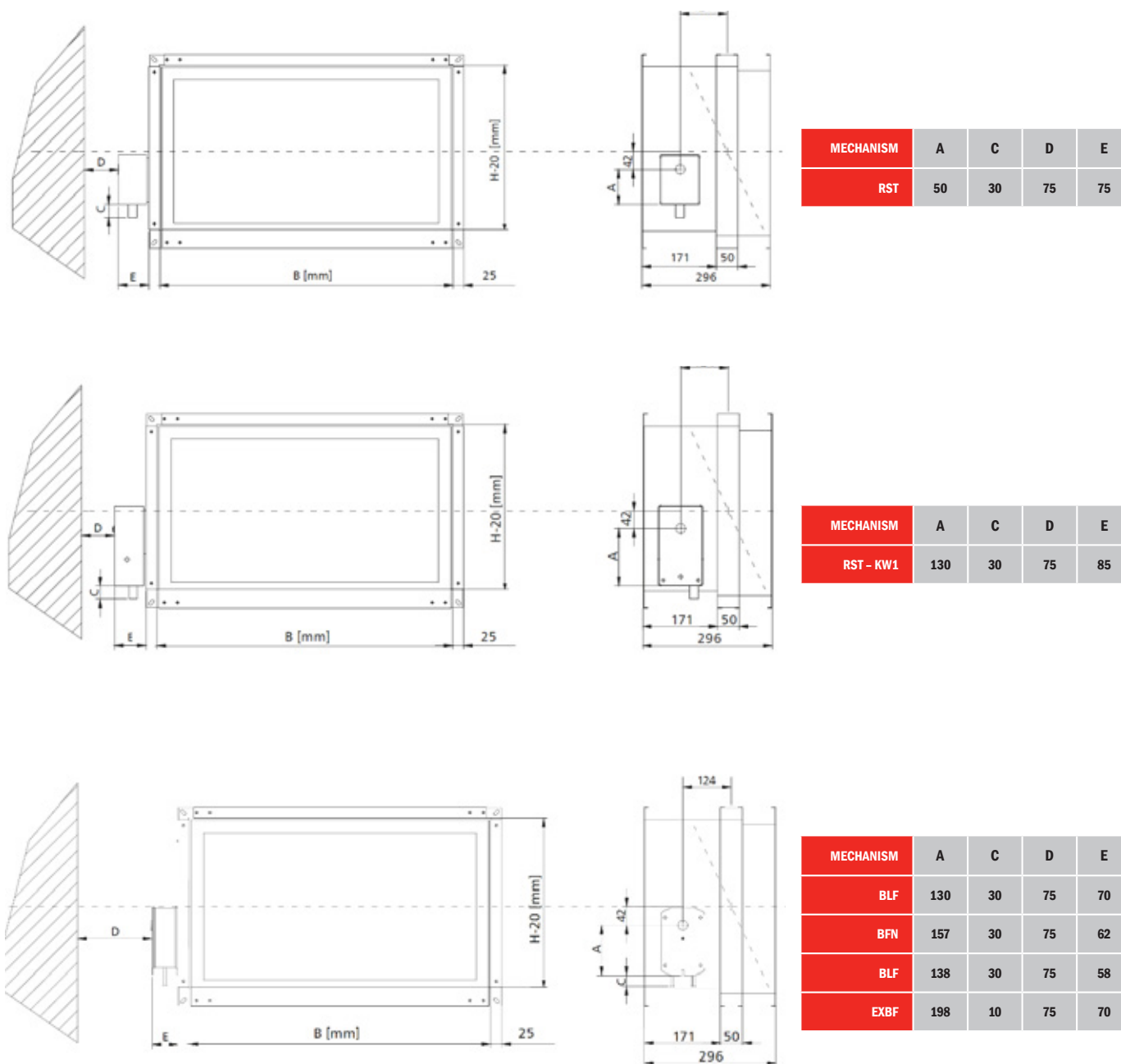
RECTANGULAR FIRE DAMPER

DIMENSIONS

RECTANGULAR FIRE DAMPER “mcr FID P”

- Nominal width B: from 200 mm. to 1500 mm.
- Nominal height H: from 200 mm. to 1500 mm.
- Maximum surface area through the door up to 1.8 m2.

Dimensions depends on the mechanism used:



NOTE: Apart from the standard sizes, the dampers may be manufactured in intermediate sizes

FIRE DAMPER

RECTANGULAR FIRE DAMPER

ESTIMATED DAMPER WEIGHT

RECTANGULAR FIRE DAMPER “mcr FID C”

Weight depends on the duct dimensions (kg):

		Width B (mm)							
		200	250	300	400	500	600	700	800
Height H (mm)	200	7,5	8	9	10	11	14	16	18
	250	8	9,5	10	11	14	15	17	19
	300	9	10,5	11	12	15	16	18	20
	350	10	11,5	12	13	16	17	19	21
	400	11	12,5	13,5	14	18	19	21	22

RECTANGULAR FIRE DAMPER “mcr FID P”

Weight depending on the duct dimensions (kg):

		Width B (mm)													
		200	250	300	400	500	600	700	800	800	800	800	800	800	800
Height H (mm)	200	9,5	9,7	10	10	15	17	17,5	19	22	25	28	30	33	45
	250	9,5	10	11	11	16	17,5	18	21	24	27	29	32	34	48
	300	10	11	11	12	17	20	21	23	26	28	31	34	38	51
	350	11	11	11	16	18	20,5	23	26	28	29	33	35	36	53
	400	10	11	12	18	19	21	25	29	30	33	35	36	39	55
	500	15	16	17	19	20	23	27	32	33	35	38	40	44	56
	600	17	17,5	20	21	30	30	30	35	37	39	43	48	52	58
	700	17,5	18	21	23	30	35	35	40	42	44	47	52	54	65
	800	20	21	22	24	29	35	37	41	43	49	52	57	60	78
	900	22	25	25	28	33	35	39	43	47	53	56	60	62	82
	1000	23	29	28	33	36	42	43	49	53	56	59	65	67	98
	1100	26	30	31	35	38	42	47	56	59	62	63	69	71	101
	1200	32	33	35	36	40	49	53	56	61	71	72	73	85	105
	1300	39	40	38	39	44	52	57	59	78	79	80	81	92	-
	1400	-	-	48	39	48	56	63	65	80	82	85	87	-	-
	1500	-	-	50	50	52	58	68	71	82	98	115	120	-	-

NOTE: For dampers without actuator, subtract 1 kg..

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TECHNICAL PARAMETERS

RECTANGULAR FIRE DAMPER “mcr FID C”

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{WA} – Damper noise level [dB]

		H [mm]															
		200					250					300					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]
B [mm]	200	4	0.04	0.033	468	7	27	0.05	0.043	612	6	26	0.06	0.053	756	6	28
		6			702	15	37			918	13	37			1 134	13	38
		8			936	26	45			1 224	24	45			1 512	22	44
		10			1 170	41	51			1 530	37	50			1 890	34	50
	250	4	0.05	0.041	585	6	27	0.0625	0.053	765	6	27	0.075	0.066	945	5	26
		6			878	14	37			1 148	13	38			1 418	11	37
		8			1 170	24	45			1 530	23	45			1 890	20	44
		10			1 463	38	50			1 913	36	51			2 363	31	50
	300	4	0.06	0.049	702	6	27	0.075	0.064	918	6	28	0.09	0.079	1 134	4	26
		6			1 053	13	38			1 377	13	38			1 701	10	36
		8			1 404	24	45			1 836	22	46			2 268	18	44
		10			1 755	37	51			2 295	35	51			2 835	28	49
	350	4	0.07	0.057	819	6	27	0.0875	0.074	1 071	5	27	0.105	0.092	1 323	4	25
		6			1 229	13	38			1 607	11	37			1 985	9	35
		8			1 638	22	45			2 142	20	45			2 646	16	43
		10			2 048	35	51			2 678	31	50			3 308	25	49
	400	4	0.08	0.065	936	5	27	0.1	0.085	1 224	4	25	0.12	0.105	1 512	4	24
		6			1 404	12	38			1 836	9	35			2 268	8	34
		8			1 872	22	45			2 448	17	43			3 024	14	42
		10			2 340	34	51			3 060	26	49			3 780	22	47
	450	4	0.09	0.073	1 053	5	27	0.1125	0.096	1 377	3	22	0.135	0.118	1 701	3	23
		6			1 580	11	37			2 066	7	33			2 552	7	33
		8			2 106	20	45			2 754	13	40			3 402	13	41
		10			2 633	31	50			3 443	20	46			4 253	20	47
	500	4	0.1	0.081	1 170	4	26	0.125	0.106	1 530	3	23	0.15	0.131	1 890	3	23
		6			1 755	10	36			2 295	8	34			2 835	7	34
		8			2 340	18	44			3 060	13	41			3 780	13	41
		10			2 925	28	50			3 825	21	47			4 725	20	47
	550	4	0.11	0.089	1 287	4	25	0.1375	0.117	1 683	3	23	0.165	0.144	2 079	3	22
		6			1 931	9	36			2 525	7	33			3 119	6	33
		8			2 574	17	43			3 366	13	41			4 158	12	40
		10			3 218	26	49			4 208	20	47			5 198	18	46
	600	4	0.12	0.098	1 404	3	21	0.15	0.128	1 836	3	20	0.18	0.158	2 268	2	20
		6			2 106	7	32			2 754	6	31			3 402	5	31
		8			2 808	12	39			3 672	10	38			4 536	10	38
		10			3 510	19	45			4 590	16	44			5 670	15	44
	650	4	0.13	0.106	1 521	3	22	0.1625	0.138	1 989	3	21	0.195	0.171	2 457	2	20
		6			2 282	7	32			2 984	6	31			3 686	5	30
		8			3 042	12	40			3 978	10	39			4 914	9	38
		10			3 803	19	46			4 973	16	45			6 143	14	44
	700	4	0.14	0.114	1 638	3	21	0.175	0.149	2 142	2	20	0.21	0.184	2 646	2	19
		6			2 457	6	32			3 213	5	31			3 969	5	30
		8			3 276	12	39			4 284	10	38			5 292	8	37
		10			4 095	18	45			5 355	15	44			6 615	13	43
	750	4	0.15	0.122	1 755	3	21	0.1875	0.159	2 295	2	20	0.225	0.197	2 835	2	20
		6			2 633	6	31			3 443	5	31			4 253	5	30
		8			3 510	11	39			4 590	10	38			5 670	8	38
		10			4 388	17	45			5 738	15	44			7 088	13	43
	800	4	0.16	0.130	1 872	2	20	0.2	0.170	2 448	2	20	0.24	0.210	3 024	2	19
		6			2 808	5	30			3 672	5	30			4 536	4	29
		8			3 744	10	38			4 896	9	38			6 048	8	37
		10			4 680	15	43			6 120	14	44			7 560	12	43

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{W/A} – Damper noise level [dB]

		H [mm]										
		350					400					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]
B [mm]	200	4	0.07	0.063	900	5	26	0.08	0.073	1 044	5	26
		6			1 350	12	37			1 566	11	37
		8			1 800	21	44			2 088	19	44
		10			2 250	32	50			2 610	30	50
	250	4	0.0875	0.078	1 125	4	25	0.1	0.091	1 305	4	25
		6			1 688	10	36			1 958	9	35
		8			2 250	17	43			2 610	16	43
		10			2 813	27	49			3 263	25	49
	300	4	0.105	0.094	1 350	4	26	0.12	0.109	1 566	4	24
		6			2 025	10	36			2 349	8	35
		8			2 700	17	44			3 132	15	42
		10			3 375	27	50			3 915	23	48
	350	4	0.1225	0.109	1 575	4	25	0.14	0.127	1 827	4	25
		6			2 363	9	36			2 741	8	36
		8			3 150	15	43			3 654	15	43
		10			3 938	24	49			4 568	23	49
	400	4	0.14	0.125	1 800	3	24	0.16	0.145	2 088	3	23
		6			2 700	8	34			3 132	7	34
		8			3 600	13	42			4 176	12	41
		10			4 500	21	48			5 220	19	47
	450	4	0.1575	0.141	2 025	3	24	0.18	0.163	2 349	3	21
		6			3 038	7	34			3 524	6	32
		8			4 050	13	42			4 698	10	39
		10			5 063	20	48			5 873	16	45
	500	4	0.175	0.156	2 250	2	20	0.2	0.181	2 610	2	20
		6			3 375	5	31			3 915	5	31
		8			4 500	10	38			5 220	9	38
		10			5 625	15	44			6 525	14	44
	550	4	0.1925	0.172	2 475	2	19	0.22	0.199	2 871	2	20
		6			3 713	5	29			4 307	5	30
		8			4 950	8	37			5 742	8	38
		10			6 188	13	43			7 178	13	43
	600	4	0.21	0.188	2 700	2	18	0.24	0.218	3 132	2	19
		6			4 050	4	29			4 698	4	28
		8			5 400	8	36			6 264	7	36
		10			6 750	12	42			7 830	11	42
	650	4	0.2275	0.203	2 925	2	19	0.26	0.236	3 393	2	18
		6			4 388	4	29			5 090	4	29
		8			5 850	8	37			6 786	7	36
		10			7 313	12	42			8 483	11	42
	700	4	0.245	0.219	3 150	2	18	0.28	0.254	3 654	2	18
		6			4 725	4	28			5 481	4	29
		8			6 300	7	36			7 308	7	36
		10			7 875	11	42			9 135	11	42
	750	4	0.2625	0.234	3 375	2	18	0.3	0.272	3 915	2	17
		6			5 063	4	29			5 873	4	28
		8			6 750	7	36			7 830	6	35
		10			8 438	11	42			9 788	10	41
	800	4	0.28	0.250	3 600	2	18	0.32	0.290	4 176	2	18
		6			5 400	4	29			6 264	4	28
		8			7 200	7	36			8 352	6	36
		10			9 000	11	42			10 440	10	41

FIRE DAMPER

RECTANGULAR FIRE DAMPER

RECTANGULAR FIRE DAMPER “mcr FID P”

B – Nominal width [mm]

H – Nominal height [mm]

Se – Damper active cross-section [m²]

v – Velocity [m/s]

Sk – Duct cross-section [m²]

L_{w/A} – Damper noise level [dB]

Q – Flow [m³/h]

dp – Pressure drop [Pa]

		H [mm]														
		200					250					300				
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]
B [mm]	4	0.040	0.029	420	9	31	0.050	0.039	564	9	31	0.060	0.049	708	8	32
	6			631	21	41			847	19	42			1 063	19	42
	8			841	37	49			1 129	35	49			1 417	33	50
	10			1 051	58	55			1 411	54	55			1 771	52	55
	4	0.050	0.037	526	9	31	0.063	0.049	706	9	32	0.075	0.062	886	8	32
	6			788	21	42			1 058	19	43			1 328	18	42
	8			1 051	37	50			1 411	35	50			1 771	31	50
	10			1 314	57	55			1 764	54	56			2 214	49	56
	4	0.060	0.044	631	9	32	0.075	0.059	847	8	33	0.090	0.074	1 063	8	32
	6			946	20	43			1 270	19	43			1 594	17	43
	8			1 261	36	50			1 693	34	51			2 125	30	50
	10			1 577	56	56			2 117	53	56			2 657	47	56
	4	0.070	0.051	736	9	33	0.088	0.069	988	8	33	0.105	0.086	1 240	7	32
	6			1 104	20	43			1 482	19	44			1 860	16	43
	8			1 472	36	51			1 976	33	51			2 480	29	50
	10			1 840	56	57			2 470	52	57			3 100	45	56
	4	0.080	0.058	841	9	33	0.100	0.078	1 129	8	34	0.120	0.098	1 417	7	32
	6			1 261	19	43			1 693	19	44			2 125	15	42
	8			1 682	35	51			2 258	33	52			2 834	27	50
	10			2 102	54	57			2 822	52	57			3 542	42	56
	4	0.090	0.066	946	9	33	0.113	0.088	1 270	7	32	0.135	0.111	1 594	7	32
	6			1 419	19	44			1 905	17	43			2 391	15	43
	8			1 892	35	51			2 540	29	51			3 188	27	50
	10			2 365	54	57			3 175	46	56			3 985	42	56
4	0.100	0.073	1 051	9	34	0.125	0.098	1 411	7	32	0.150	0.123	1 771	7	32	
6			1 577	19	44			2 117	16	43			2 657	15	43	
8			2 102	35	52			2 822	28	50			3 542	26	50	
10			2 628	54	58			3 528	44	56			4 428	41	56	
4	0.110	0.080	1 156	8	34	0.138	0.108	1 552	7	33	0.165	0.135	1 948	6	33	
6			1 734	19	44			2 328	16	43			2 922	14	43	
8			2 313	34	52			3 105	28	51			3 897	26	51	
10			2 891	53	58			3 881	44	57			4 871	40	56	
4	0.120	0.088	1 261	8	34	0.150	0.118	1 693	7	33	0.180	0.148	2 125	6	33	
6			1 892	19	45			2 540	15	43			3 188	14	43	
8			2 523	34	52			3 387	27	51			4 251	26	51	
10			3 154	53	58			4 234	42	56			5 314	40	57	
4	0.130	0.095	1 367	8	35	0.163	0.127	1 835	6	32	0.195	0.160	2 303	6	33	
6			2 050	19	45			2 752	14	43			3 454	14	44	
8			2 733	34	53			3 669	26	50			4 605	26	51	
10			3 416	53	59			4 586	40	56			5 756	40	57	
4	0.140	0.102	1 472	8	35	0.175	0.137	1 976	6	33	0.210	0.172	2 480	6	34	
6			2 208	19	45			2 964	14	43			3 720	14	44	
8			2 943	33	53			3 951	26	51			4 959	26	52	
10			3 679	52	59			4 939	40	56			6 199	40	57	
4	0.160	0.117	1 682	8	35	0.200	0.157	2 258	6	32	0.240	0.197	2 834	6	33	
6			2 523	18	45			3 387	14	43			4 251	14	44	
8			3 364	32	53			4 516	24	51			5 668	24	52	
10			4 205	50	59			5 645	38	56			7 085	38	57	
4	0.180	0.131	1 892	7	34	0.225	0.176	2 540	6	32	0.270	0.221	3 188	5	32	
6			2 838	16	44			3 810	13	43			4 782	12	42	
8			3 784	29	52			5 080	23	50			6 376	21	50	
10			4 730	45	58			6 350	36	56			7 970	32	56	
4	0.200	0.146	2 102	7	34	0.250	0.196	2 822	6	32	0.300	0.246	3 542	5	32	
6			3 154	16	45			4 234	13	43			5 314	12	43	
8			4 205	29	52			5 645	22	50			7 085	21	50	
10			5 256	45	58			7 056	35	56			8 856	32	56	
4	0.220	0.161	2 313	7	35	0.275	0.216	3 105	5	32	0.330	0.271	3 897	5	33	
6			3 469	16	45			4 657	12	43			5 845	12	43	
8			4 625	29	53			6 209	22	50			7 793	21	51	
10			5 782	45	59			7 762	34	56			9 742	32	56	
4	0.240	0.175	2 523	8	37	0.300	0.235	3 387	5	33	0.360	0.295	4 251	9	40	
6			3 784	18	47			5 080	12	43			6 376	20	51	
8			5 046	29	53			6 774	22	51			8 502	36	58	
10			6 307	45	59			8 467	34	57			10 627	42	60	
4	0.260	0.190	2 733	8	37	0.325	0.255	3 669	5	33	0.390	0.320	4 605	5	33	
6			4 100	18	47			5 504	12	43			6 908	12	44	
8			5 466	29	54			7 338	21	51			9 210	21	51	
10			6 833	45	59			9 173	33	57			11 513	32	57	
4	0.280	0.204	2 943	7	36	0.350	0.274	3 951	5	33	0.420	0.344	4 959	5	34	
6			4 415	16	46			5 927	12	44			7 439	12	44	
8			5 887	29	54			7 903	21	51			9 919	21	52	
10			7 358	45	60			9 878	32	57			12 398	32	58	
4	0.300	0.219	3 154	7	35	0.375	0.294	4 234	5	33	0.450	0.369	5 314	5	34	
6			4 730	15	46			6 350	12	44			7 970	12	45	
8			6 307	27	53			8 467	21	51			10 627	21	52	
10			7 884	42	59			10 584	32	57			13 284	32	58	

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{WA} – Damper noise level [dB]

		H [mm]															
		350					400					450					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]
B [mm]	200	4	0.070	0.059	852	8	32	0.080	0.069	996	7	31	0.090	0.079	1 140	7	31
		6			1 279	18	42			1 495	17	42			1 711	15	41
		8			1 705	32	50			1 993	29	49			2 281	26	49
		10			2 131	50	56			2 491	46	55			2 851	41	54
	250	4	0.088	0.074	1 066	7	31	0.100	0.087	1 246	6	29	0.113	0.099	1 426	6	29
		6			1 598	16	42			1 868	13	40			2 138	13	40
		8			2 131	29	50			2 491	23	47			2 851	22	47
		10			2 664	45	55			3 114	36	53			3 564	35	53
	300	4	0.105	0.089	1 279	7	32	0.120	0.104	1 495	6	30	0.135	0.119	1 711	5	30
		6			1 918	16	43			2 242	13	41			2 566	12	40
		8			2 557	28	50			2 989	24	48			3 421	22	48
		10			3 197	44	56			3 737	37	54			4 277	34	54
	350	4	0.123	0.104	1 492	7	32	0.140	0.121	1 744	6	30	0.158	0.139	1 996	5	30
		6			2 238	15	42			2 616	13	41			2 994	12	41
		8			2 984	26	50			3 488	22	48			3 992	21	48
		10			3 730	41	56			4 360	35	54			4 990	33	54
	400	4	0.140	0.118	1 705	6	31	0.160	0.138	1 993	6	31	0.180	0.158	2 281	5	30
		6			2 557	13	41			2 989	13	41			3 421	12	41
		8			3 410	24	49			3 986	22	49			4 562	21	48
		10			4 262	37	55			4 982	35	55			5 702	32	54
	450	4	0.158	0.133	1 918	5	30	0.180	0.156	2 242	5	30	0.203	0.178	2 566	4	29
		6			2 877	12	41			3 363	12	41			3 849	10	40
		8			3 836	22	48			4 484	21	48			5 132	18	47
		10			4 795	34	54			5 605	32	54			6 415	28	53
	500	4	0.175	0.148	2 131	5	31	0.200	0.173	2 491	5	30	0.225	0.198	2 851	4	29
		6			3 197	12	41			3 737	11	40			4 277	9	39
		8			4 262	22	49			4 982	19	48			5 702	17	47
		10			5 328	34	55			6 228	30	54			7 128	26	52
	550	4	0.193	0.163	2 557	5	30	0.220	0.190	2 740	5	30	0.248	0.218	3 136	4	29
		6			3 836	12	41			4 110	11	41			4 704	9	40
		8			5 115	21	48			5 481	19	48			6 273	17	47
		10			6 394	32	54			6 851	30	54			7 841	26	53
	600	4	0.210	0.178	2 557	5	30	0.240	0.208	2 989	4	28	0.270	0.238	3 421	4	29
		6			3 836	10	40			4 484	8	37			5 132	9	40
		8			5 115	19	48			5 979	14	45			6 843	17	47
		10			6 394	29	53			7 474	27	53			8 554	26	53
	650	4	0.228	0.192	2 771	5	30	0.260	0.225	3 239	4	30	0.293	0.257	3 707	4	30
		6			4 156	10	40			4 858	10	40			5 560	9	40
		8			5 541	19	48			6 477	17	48			7 413	17	48
		10			6 926	29	54			8 096	27	53			9 266	26	54
700	4	0.245	0.207	2 984	5	30	0.28	0.242	3 488	4	30	0.315	0.277	3 992	4	30	
	6			4 476	10	41			5 232	10	40			5 988	9	40	
	8			5 967	19	48			6 975	17	48			7 983	16	48	
	10			7 459	29	54			8 719	27	54			9 979	25	53	
800	4	0.280	0.237	3 410	4	30	0.32	0.277	3 986	4	30	0.360	0.317	4 562	4	29	
	6			5 115	10	41			5 979	9	41			6 843	9	40	
	8			6 820	18	48			7 972	17	48			9 124	16	47	
	10			8 525	28	54			9 965	26	54			11 405	25	53	
900	4	0.315	0.266	3 836	4	31	0.360	0.311	4 484	6	35	0.405	0.356	5 132	4	29	
	6			5 754	10	41			6 726	12	44			7 698	9	40	
	8			7 672	18	49			8 968	26	54			10 264	16	47	
	10			9 590	28	55			11 210	33	58			12 830	25	53	
1000	4	0.350	0.296	4 262	4	30	0.400	0.346	4 982	4	31	0.450	0.396	5 702	4	29	
	6			6 394	9	41			7 474	9	42			8 554	9	40	
	8			8 525	17	48			9 965	17	49			11 405	16	47	
	10			10 656	26	54			12 456	26	55			14 256	25	53	
1100	4	0.385	0.326	4 689	4	32	0.440	0.381	5 481	4	31	0.495	0.436	6 273	4	29	
	6			7 033	10	42			8 221	9	42			9 409	9	39	
	8			9 377	18	50			10 961	17	49			12 545	15	47	
	10			11 722	28	56			13 702	26	55			15 682	24	53	
1200	4	0.420	0.355	5 115	4	31	0.480	0.415	5 979	4	31	0.540	0.475	6 843	4	29	
	6			7 672	9	41			8 968	9	42			10 264	9	39	
	8			10 230	16	49			11 958	16	49			13 686	15	47	
	10			12 787	25	54			14 947	25	55			17 107	24	53	
1300	4	0.455	0.385	5 541	4	32	0.520	0.450	6 477	4	32	0.585	0.515	7 413	4	28	
	6			8 312	10	43			9 716	9	42			11 120	8	39	
	8			11 082	17	50			12 954	16	50			14 826	15	46	
	10			13 853	27	56			16 193	25	55			18 533	23	52	
1400	4	0.490	0.414	5 967	4	32	0.560	0.484	6 975	4	32	0.630	0.554	7 983	4	28	
	6			8 951	10	43			10 463	9	43			11 975	8	39	
	8			11 935	17	50			13 951	16	50			15 967	15	46	
	10			14 918	27	56			17 438	25	56			19 958	23	52	
1500	4	0.525	0.444	6 394	4	32	0.600	0.519	7 474	4	32	0.675	0.594	8 554	4	28	
	6			9 590	9	43			11 210	9	43			12 830	8	38	
	8			12 787	17	50			14 947	16	50			17 107	14	46	
	10			15 984	26	56			18 684	25	56			21 384	22	51	

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{W/A} – Damper noise level [dB]

		H [mm]																	
		500						550						600					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]		
B [mm]	200	4	0.100	0.089	1 284	6	29	0.110	0.099	1 428	5	29	0.120	0.109	1 572	5	29		
		6			1 927	13	40			2 143	12	39			2 359	12	39		
		8			2 569	22	47			2 857	21	47			3 145	21	47		
		10			3 211	35	53			3 571	33	53			3 931	32	53		
	250	4	0.125	0.112	1 606	6	30	0.138	0.124	1 786	5	30	0.150	0.137	1 966	5	30		
		6			2 408	13	41			2 678	12	40			2 948	12	40		
		8			3 211	22	48			3 571	21	48			3 931	21	48		
		10			4 014	35	54			4 464	33	53			4 914	32	54		
	300	4	0.150	0.134	1 927	5	30	0.165	0.149	2 143	5	30	0.180	0.164	2 359	5	30		
		6			2 890	12	41			3 214	12	41			3 538	11	40		
		8			3 853	21	48			4 285	21	48			4 717	19	48		
		10			4 817	33	54			5 357	32	54			5 897	30	53		
	350	4	0.175	0.156	2 248	5	30	0.193	0.174	2 500	5	31	0.210	0.191	2 752	5	30		
		6			3 372	12	41			3 750	12	41			4 128	10	40		
		8			4 496	21	48			5 000	21	49			5 504	19	48		
		10			5 620	32	54			6 250	32	55			6 880	29	54		
	400	4	0.200	0.178	2 569	5	30	0.220	0.198	2 857	5	30	0.240	0.218	3 145	4	30		
		6			3 853	11	41			4 285	10	41			4 717	10	41		
		8			5 138	19	48			5 714	19	48			6 290	18	48		
		10			6 422	30	54			7 142	29	54			7 862	28	54		
	450	4	0.225	0.201	2 890	4	29	0.248	0.223	3 214	4	29	0.270	0.246	3 538	4	30		
		6			4 335	9	39			4 821	9	40			5 307	9	40		
		8			5 780	17	47			6 428	17	47			7 076	17	48		
		10			7 225	26	52			8 035	26	53			8 845	26	53		
	500	4	0.250	0.223	3 211	4	27	0.275	0.248	3 571	4	29	0.300	0.273	3 931	4	29		
		6			4 817	8	38			5 357	9	39			5 897	9	39		
		8			6 422	14	45			7 142	15	47			7 862	15	47		
		10			8 028	20	50			8 928	24	52			9 828	24	53		
	550	4	0.275	0.245	3 853	3	27	0.303	0.273	4 285	4	28	0.330	0.300	4 717	4	28		
		6			5 780	8	37			6 428	8	38			7 076	8	39		
		8			7 707	13	45			8 571	14	46			9 435	14	46		
		10			9 634	21	51			10 714	22	52			11 794	22	52		
	600	4	0.300	0.268	3 853	3	27	0.330	0.298	4 285	3	28	0.360	0.328	4 717	3	28		
		6			5 780	8	38			6 428	8	38			7 076	8	39		
		8			7 707	13	45			8 571	13	46			9 435	13	46		
		10			9 634	21	51			10 714	21	51			11 794	21	52		
	650	4	0.325	0.290	4 175	4	31	0.358	0.322	4 643	3	28	0.390	0.355	5 111	3	28		
		6			6 262	10	41			6 964	8	38			7 666	8	39		
		8			8 349	17	49			9 285	13	46			10 221	13	46		
		10			10 436	21	51			11 606	21	52			12 776	21	52		
	700	4	0.350	0.312	4 496	3	28	0.385	0.347	5 000	3	28	0.420	0.382	5 504	3	29		
		6			6 744	8	38			7 500	8	39			8 256	8	39		
		8			8 991	13	46			9 999	13	46			11 007	13	47		
		10			11 239	21	52			12 499	21	52			13 759	21	52		
	800	4	0.400	0.357	5 138	3	28	0.440	0.397	5 714	3	29	0.480	0.437	6 290	3	29		
		6			7 707	8	39			8 571	8	39			9 435	8	40		
		8			10 276	13	46			11 428	13	47			12 580	13	47		
		10			12 845	21	52			14 285	21	53			15 725	21	53		
900	4	0.450	0.401	5 780	3	28	0.495	0.446	6 428	3	29	0.540	0.491	7 076	3	30			
	6			8 670	8	39			9 642	8	40			10 614	8	38			
	8			11 560	13	46			12 856	13	47			14 152	13	45			
	10			14 450	21	52			16 070	21	53			17 690	21	51			
1000	4	0.500	0.446	6 422	3	28	0.550	0.496	6 428	3	30	0.600	0.546	7 862	3	30			
	6			9 634	8	39			9 642	8	40			11 794	8	41			
	8			12 845	13	46			12 856	13	48			15 725	13	48			
	10			16 056	21	52			16 070	21	54			19 656	21	54			
1100	4	0.550	0.491	7 065	4	29	0.605	0.546	7 857	4	31	0.660	0.601	8 649	3	31			
	6			10 597	8	39			11 785	8	41			12 973	8	41			
	8			14 129	14	47			15 713	14	49			17 297	13	49			
	10			17 662	22	53			19 642	22	55			21 622	21	54			
1200	4	0.600	0.535	7 707	3	27	0.660	0.595	8 571	3	30	0.720	0.655	9 435	3	30			
	6			11 560	7	38			12 856	7	40			14 152	7	40			
	8			15 414	13	45			17 142	13	48			18 870	12	48			
	10			19 267	20	51			21 427	20	54			23 587	19	54			
1300	4	0.650	0.580	8 349	3	27	0.715	0.645	9 285	3	30	0.780	0.710	10 221	3	30			
	6			12 524	7	38			13 928	7	41			15 332	7	41			
	8			16 698	13	45			18 570	13	48			20 442	12	48			
	10			20 873	20	51			23 213	20	54			25 553	19	54			
1400	4	0.700	0.624	8 991	3	27	0.770	0.694	9 999	3	31	0.840	0.764	11 007	3	30			
	6			13 487	7	38			14 999	7	41			16 511	7	41			
	8			17 983	13	45			19 999	13	49			22 015	12	48			
	10			22 478	20	51			24 998	20	54			27 518	19	54			
1500	4	0.750	0.669	9 634	3	27	0.825	0.744	10 714	3	31	0.900	0.819	11 794	3	31			
	6			14 450	7	38			16 070	7	41			17 690	7	41			
	8			19 267	13	45			21 427	13	49			23 587	12	49			
	10			24 084	20	51			26 784	20	55			29 484	19	54			

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{W/A} – Damper noise level [dB]

		H [mm]																	
		650						700						750					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]		
B [mm]	200	4	0.130	0.119	1 716	5	29	0.140	0.129	1 860	5	29	0.150	0.139	2 004	5	29		
		6			2 575	11	39			2 791	11	40			3 007	11	40		
		8			3 433	20	47			3 721	20	47			4 009	20	47		
		10			4 291	31	53			4 651	31	53			5 011	31	53		
	250	4	0.163	0.149	2 146	5	30	0.175	0.162	2 326	5	30	0.188	0.174	2 506	5	30		
		6			3 218	11	40			3 488	11	41			3 758	11	41		
		8			4 291	20	48			4 651	20	48			5 011	20	48		
		10			5 364	31	53			5 814	31	54			6 264	31	54		
	300	4	0.195	0.179	2 575	5	30	0.210	0.194	2 791	4	29	0.225	0.209	3 007	4	30		
		6			3 862	10	40			4 186	10	40			4 510	10	40		
		8			5 149	19	48			5 581	18	47			6 013	18	48		
		10			6 437	29	53			6 977	28	53			7 517	28	54		
	350	4	0.228	0.209	3 004	4	30	0.245	0.226	3 256	4	30	0.263	0.244	3 508	4	30		
		6			4 506	10	40			4 884	10	40			5 262	10	41		
		8			6 008	18	48			6 512	17	48			7 016	17	48		
		10			7 510	28	54			8 140	27	53			8 770	27	54		
	400	4	0.260	0.238	3 433	4	30	0.280	0.258	3 721	4	30	0.300	0.278	4 009	4	31		
		6			5 149	10	41			5 581	10	41			6 013	10	41		
		8			6 866	18	48			7 442	17	48			8 018	17	49		
		10			8 582	28	54			9 302	27	54			10 022	27	54		
	450	4	0.293	0.268	3 862	4	30	0.315	0.291	4 186	4	29	0.338	0.313	4 510	4	30		
		6			5 793	9	40			6 279	9	40			6 765	9	40		
		8			7 724	17	48			8 372	15	47			9 020	15	48		
		10			9 655	26	54			10 465	24	53			11 275	24	53		
	500	4	0.325	0.298	4 291	4	29	0.350	0.323	4 651	4	29	0.375	0.348	5 011	4	29		
		6			6 437	9	40			6 977	8	40			7 517	8	40		
		8			8 582	15	47			9 302	15	47			10 022	15	47		
		10			10 728	24	53			11 628	23	53			12 528	23	53		
	550	4	0.358	0.328	5 149	4	29	0.385	0.355	5 116	4	29	0.413	0.383	5 512	4	29		
		6			7 724	8	39			7 674	8	39			8 268	8	40		
		8			10 299	14	47			10 233	14	47			11 025	14	47		
		10			12 874	22	52			12 791	22	53			13 781	22	53		
	600	4	0.390	0.358	5 149	3	28	0.420	0.388	5 581	3	29	0.450	0.418	6 013	3	29		
		6			7 724	8	39			8 372	8	39			9 020	8	40		
		8			10 299	13	46			11 163	13	47			12 027	13	47		
		10			12 874	21	52			13 954	21	53			15 034	21	53		
	650	4	0.423	0.387	5 579	3	28	0.455	0.420	6 047	3	28	0.488	0.452	6 515	3	28		
		6			8 368	7	39			9 070	7	39			9 772	7	39		
		8			11 157	13	46			12 093	13	46			13 029	12	46		
		10			13 946	20	52			15 116	20	52			16 286	19	52		
	700	4	0.455	0.417	6 008	3	28	0.490	0.452	6 512	3	29	0.525	0.487	7 016	3	28		
		6			9 012	7	39			9 768	7	39			10 524	7	39		
		8			12 015	13	46			13 023	13	47			14 031	12	46		
		10			15 019	20	52			16 279	20	53			17 539	19	52		
	800	4	0.520	0.477	6 866	3	27	0.560	0.517	7 442	4	29	0.600	0.557	8 018	3	28		
		6			10 299	6	38			11 163	7	37			12 027	6	39		
		8			13 732	12	45			14 884	11	43			16 036	12	46		
		10			17 165	18	51			18 605	16	47			20 045	18	52		
900	4	0.585	0.536	7 724	3	26	0.630	0.581	8 372	3	27	0.675	0.626	9 020	3	27			
	6			11 586	6	36			12 558	6	37			13 530	6	38			
	8			15 448	10	44			16 744	10	45			18 040	10	45			
	10			19 310	16	50			20 930	16	51			22 550	16	51			
1000	4	0.650	0.596	8 582	3	26	0.700	0.646	9 302	3	27	0.750	0.696	10 022	3	28			
	6			12 874	6	36			13 954	6	38			15 034	6	38			
	8			17 165	10	44			18 605	10	45			20 045	10	46			
	10			21 456	16	50			23 256	16	51			25 056	16	52			
1100	4	0.715	0.656	9 441	3	29	0.770	0.711	10 233	3	31	0.825	0.766	11 025	3	28			
	6			14 161	8	40			15 349	8	42			16 537	6	39			
	8			18 881	13	47			20 465	13	49			22 049	10	46			
	10			23 602	21	53			25 582	21	55			27 562	16	52			
1200	4	0.780	0.715	10 299	3	28	0.840	0.775	11 163	3	30	0.900	0.835	12 027	2	28			
	6			15 448	7	39			16 744	7	41			18 040	5	38			
	8			20 598	12	46			22 326	12	48			24 054	10	46			
	10			25 747	19	52			27 907	19	54			30 067	15	52			
1300	4	0.845	0.775	11 157	3	28	0.910	0.840	12 093	3	31	0.975	0.905	13 029	2	28			
	6			16 736	7	39			18 140	7	41			19 544	5	39			
	8			22 314	12	46			24 186	12	49			26 058	10	46			
	10			27 893	19	52			30 233	19	55			32 573	15	52			
1400	4	0.910	0.834	12 015	3	28	0.980	0.904	13 023	3	31	1.050	0.974	14 031	2	28			
	6			18 023	7	39			19 535	7	42			21 047	5	39			
	8			24 031	12	46			26 047	12	49			28 063	10	46			
	10			30 038	19	52			32 558	19	55			35 078	15	52			
1500	4	0.975	0.894	12 874	3	28	1.050	0.969	13 954	3	31	1.125	1.044	15 034	3	30			
	6			19 310	7	39			20 930	7	42			22 550	6	41			
	8			25 747	12	46			27 907	12	49			30 067	11	48			
	10			32 184	19	52			34 884	19	55			37 584	17	54			

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{w/A} – Damper noise level [dB]

		H [mm]																
		800						850					900					
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	
200	4	0.160	0.149	2 148	5	29	0.170	0.159	2 292	5	29	0.180	0.169	2 436	5	30		
	6			3 223	11	40			3 439	11	40			3 655	11	40		
	8			4 297	19	47			4 585	19	48			4 873	19	48		
	10			5 371	30	53			5 731	30	53			6 091	30	54		
250	4	0.200	0.187	2 686	5	30	0.213	0.199	2 866	5	30	0.225	0.212	3 046	5	31		
	6			4 028	11	41			4 298	11	41			4 568	11	41		
	8			5 371	19	48			5 731	19	49			6 091	19	49		
	10			6 714	30	54			7 164	30	54			7 614	30	55		
300	4	0.240	0.224	3 223	4	30	0.255	0.239	3 439	4	30	0.270	0.254	3 655	4	30		
	6			4 834	10	41			5 158	10	41			5 482	10	41		
	8			6 445	18	48			6 877	18	48			7 309	17	48		
	10			8 057	28	54			8 597	28	54			9 137	27	54		
350	4	0.280	0.261	3 760	4	30	0.298	0.279	4 012	4	31	0.315	0.296	4 264	4	30		
	6			5 640	10	41			6 018	10	41			6 396	9	41		
	8			7 520	17	48			8 024	17	49			8 528	17	48		
	10			9 400	27	54			10 030	27	54			10 660	26	54		
400	4	0.320	0.298	4 297	4	31	0.340	0.318	4 585	4	31	0.360	0.338	4 873	4	30		
	6			6 445	10	41			6 877	10	42			7 309	9	41		
	8			8 594	17	49			9 170	17	49			9 746	16	48		
	10			10 742	27	55			11 462	27	55			12 182	25	54		
450	4	0.360	0.336	4 834	4	29	0.383	0.358	5 158	4	29	0.405	0.381	5 482	3	29		
	6			7 251	8	39			7 737	8	40			8 223	8	39		
	8			9 668	14	47			10 316	14	47			10 964	13	47		
	10			12 085	22	53			12 895	22	53			13 705	21	52		
500	4	0.400	0.373	5 371	4	29	0.425	0.398	5 731	4	29	0.450	0.423	6 091	3	29		
	6			8 057	8	40			8 597	8	40			9 137	8	40		
	8			10 742	14	47			11 462	14	47			12 182	13	47		
	10			13 428	22	53			14 328	22	53			15 228	21	53		
550	4	0.440	0.410	5 908	3	29	0.468	0.438	6 304	3	29	0.495	0.465	6 700	3	29		
	6			8 862	8	40			9 456	8	40			10 050	7	39		
	8			11 817	13	47			12 609	13	47			13 401	13	47		
	10			14 771	21	53			15 761	21	53			16 751	20	53		
600	4	0.480	0.448	6 445	3	29	0.510	0.478	6 877	3	29	0.540	0.508	7 309	3	29		
	6			9 668	7	39			10 316	7	40			10 964	7	39		
	8			12 891	13	47			13 755	13	47			14 619	12	47		
	10			16 114	20	53			17 194	20	53			18 274	19	52		
650	4	0.520	0.485	6 983	3	28	0.553	0.517	7 451	3	29	0.585	0.550	7 919	3	29		
	6			10 474	7	39			11 176	7	39			11 878	7	39		
	8			13 965	12	46			14 901	12	47			15 837	12	47		
	10			17 456	19	52			18 626	19	53			19 796	19	53		
700	4	0.560	0.522	7 520	3	28	0.595	0.557	8 024	3	28	0.630	0.592	8 528	3	27		
	6			11 280	6	39			12 036	6	39			12 792	6	38		
	8			15 039	12	46			16 047	12	46			17 055	10	45		
	10			18 799	18	52			20 059	18	52			21 319	16	51		
800	4	0.640	0.597	8 594	3	27	0.680	0.637	9 170	3	27	0.720	0.677	9 746	3	28		
	6			12 891	6	38			13 755	6	38			14 619	6	38		
	8			17 188	10	45			18 340	10	45			19 492	10	46		
	10			21 485	16	51			22 925	16	51			24 365	16	51		
900	4	0.720	0.671	9 668	3	28	0.765	0.716	10 316	3	28	0.810	0.761	10 964	3	28		
	6			14 502	6	38			15 474	6	38			16 446	6	39		
	8			19 336	10	46			20 632	10	46			21 928	10	46		
	10			24 170	16	51			25 790	16	52			27 410	16	52		
1000	4	0.800	0.746	10 742	3	28	0.850	0.796	11 462	3	28	0.900	0.846	12 182	3	29		
	6			16 114	6	39			17 194	6	39			18 274	6	39		
	8			21 485	10	46			22 925	10	46			24 365	10	47		
	10			26 856	16	52			28 656	16	52			30 456	16	52		
1100	4	0.880	0.821	11 817	3	28	0.935	0.876	12 609	3	29	0.990	0.931	13 401	3	29		
	6			17 725	6	39			18 913	6	39			20 101	6	40		
	8			23 633	10	46			25 217	10	47			26 801	10	47		
	10			29 542	16	52			31 522	16	53			33 502	16	53		
1200	4	0.960	0.895	12 891	2	28	1.020	0.955	13 755	2	28	1.080	1.015	14 619	2	28		
	6			19 336	5	39			20 632	5	39			21 928	5	38		
	8			25 782	10	46			27 510	10	46			29 238	9	46		
	10			32 227	15	52			34 387	15	52			36 547	14	51		
1300	4	1.040	0.970	13 965	2	28	1.105	1.035	14 901	2	29	1.170	1.100	15 837	2	29		
	6			20 948	5	39			22 352	5	39			23 756	5	39		
	8			27 930	10	46			29 802	10	47			31 674	10	47		
	10			34 913	15	52			37 253	15	52			39 593	15	53		
1400	4	1.120	1.044	15 039	2	29	1.190	1.114	16 047	3	30	1.260	1.184	17 055	2	28		
	6			22 559	5	39			24 071	6	40			25 583	5	39		
	8			30 079	10	47			32 095	10	48			34 111	9	46		
	10			37 598	15	52			40 118	16	54			42 638	14	52		
1500	4	1.200	1.119	16 114	3	31	1.275	1.194	17 194	3	30	1.350	1.269	18 274	2	29		
	6			24 170	6	41			25 790	6	41			27 410	5	40		
	8			32 227	11	49			34 387	10	48			36 547	10	48		
	10			40 284	17	54			42 984	16	54			45 684	15	53		

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{W/A} – Damper noise level [dB]

		v [m/s]	H [mm]														
			1000					1100					1200				
			Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]
B [mm]	200	4	0.200	0.189	2 724	5	30	0.220	0.209	3 012	5	30	0.240	0.229	3 300	4	30
		6			4 087	10	40			4 519	10	41			4 951	10	41
		8			5 449	19	48			6 025	19	48			6 601	18	48
		10			6 811	29	54			7 531	29	54			8 251	28	54
	250	4	0.250	0.237	3 406	5	31	0.275	0.262	3 766	4	31	0.300	0.287	4 126	4	31
		6			5 108	10	41			5 648	10	41			6 188	10	41
		8			6 811	19	49			7 531	18	49			8 251	17	49
		10			8 514	29	55			9 414	28	55			10 314	27	55
	300	4	0.300	0.284	4 087	4	31	0.330	0.314	4 519	4	31	0.360	0.344	4 951	4	31
		6			6 130	10	41			6 778	10	42			7 426	9	42
		8			8 173	17	49			9 037	17	49			9 901	17	49
		10			10 217	27	54			11 297	27	55			12 377	26	55
	350	4	0.350	0.331	4 768	4	31	0.385	0.366	5 272	4	31	0.420	0.401	5 776	4	31
		6			7 152	9	41			7 908	9	42			8 664	9	41
		8			9 536	17	49			10 544	17	49			11 552	15	49
		10			11 920	26	55			13 180	26	55			14 440	24	54
	400	4	0.400	0.378	5 449	3	28	0.440	0.418	6 025	3	28	0.480	0.458	6 601	3	29
		6			8 173	7	39			9 037	7	39			9 901	7	39
		8			10 898	13	46			12 050	13	46			13 202	13	47
		10			13 622	20	52			15 062	20	52			16 502	20	53
	450	4	0.450	0.426	6 130	3	28	0.495	0.471	6 778	3	29	0.540	0.516	7 426	3	29
		6			9 195	7	39			10 167	7	39			11 139	7	40
		8			12 260	13	47			13 556	13	47			14 852	13	47
		10			15 325	20	52			16 945	20	53			18 565	20	53
	500	4	0.500	0.473	6 811	3	29	0.550	0.523	7 531	3	29	0.600	0.573	8 251	3	30
		6			10 217	7	39			11 297	7	40			12 377	7	40
		8			13 622	13	47			15 062	13	47			16 502	13	48
		10			17 028	20	53			18 828	20	53			20 628	20	54
	550	4	0.550	0.520	7 492	3	29	0.605	0.575	8 284	3	30	0.660	0.630	9 076	3	30
		6			11 238	7	40			12 426	7	40			13 614	7	41
		8			14 985	13	47			16 569	13	48			18 153	13	48
		10			18 731	20	53			20 711	20	54			22 691	20	54
	600	4	0.600	0.568	8 173	3	29	0.660	0.628	9 037	3	29	0.720	0.688	9 901	3	29
		6			12 260	7	40			13 556	6	39			14 852	6	40
		8			16 347	12	47			18 075	12	47			19 803	12	47
		10			20 434	19	53			22 594	18	53			24 754	18	53
	650	4	0.650	0.615	8 855	3	29	0.715	0.680	9 791	3	29	0.780	0.745	10 727	3	30
		6			13 282	7	40			14 686	6	40			16 090	6	40
		8			17 709	12	47			19 581	12	47			21 453	12	48
		10			22 136	19	53			24 476	18	53			26 816	18	53
	700	4	0.700	0.662	9 536	3	27	0.770	0.732	10 544	2	27	0.840	0.802	11 552	2	27
		6			14 304	6	38			15 816	5	38			17 328	5	38
		8			19 071	10	46			21 087	10	45			23 103	10	46
		10			23 839	16	51			26 359	15	51			28 879	15	51
	800	4	0.800	0.757	10 898	3	28	0.880	0.837	12 050	2	28	0.960	0.917	13 202	2	28
		6			16 347	6	39			18 075	5	38			19 803	5	39
		8			21 796	10	46			24 100	10	46			26 404	10	46
		10			27 245	16	52			30 125	15	52			33 005	15	52
900	4	0.900	0.851	12 260	3	29	0.990	0.941	13 556	3	29	1.080	1.031	14 852	2	29	
	6			18 390	6	39			20 334	6	40			22 278	5	39	
	8			24 520	10	47			27 112	10	47			29 704	10	47	
	10			30 650	16	52			33 890	16	53			37 130	15	52	
1000	4	1.000	0.946	13 622	3	29	1.100	1.046	15 062	2	29	1.200	1.146	16 502	2	28	
	6			20 434	6	40			22 594	5	39			24 754	5	39	
	8			27 245	10	47			30 125	10	47			33 005	9	46	
	10			34 056	16	53			37 656	15	52			41 256	14	52	
1100	4	1.100	1.041	14 985	3	29	1.210	1.151	16 569	2	29	1.320	1.261	18 153	2	29	
	6			22 477	6	40			24 853	5	40			27 229	5	39	
	8			29 969	10	48			33 137	10	47			36 305	9	47	
	10			37 462	16	53			41 422	15	53			45 382	14	52	
1200	4	1.200	1.135	16 347	2	28	1.320	1.255	18 075	10	47	1.440	1.375	19 803	2	28	
	6			24 520	5	39			27 112	22	58			29 704	5	39	
	8			32 694	9	46			36 150	38	66			39 606	8	46	
	10			40 867	14	52			45 187	14	52			49 507	13	52	
1300	4	1.300	1.230	17 709	2	28	1.430	1.360	19 581	2	28	1.560	1.490	21 453	2	28	
	6			26 564	5	39			29 372	5	38			32 180	5	39	
	8			35 418	9	46			39 162	8	46			42 906	8	46	
	10			44 273	14	52			48 953	13	52			53 633	13	52	
1400	4	1.400	1.324	19 071	2	29	1.540	1.464	21 087	2	28	1.680	1.604	23 103	2	28	
	6			28 607	5	39			31 631	5	39			34 655	4	38	
	8			38 143	9	47			42 175	8	46			46 207	8	46	
	10			47 678	14	53			52 718	13	52			57 758	12	51	
1500	4	1.500	1.419	20 434	2	28	1.650	1.569	22 594	2	29	1.800	1.719	24 754	2	28	
	6			30 650	5	39			33 890	5	39			37 130	4	38	
	8			40 867	8	46			45 187	8	47			49 507	8	46	
	10			51 084	13	52			56 484	13	52			61 884	12	52	

FIRE DAMPER

RECTANGULAR FIRE DAMPER

B – Nominal width [mm]

v – Velocity [m/s]

Q – Flow [m³/h]

H – Nominal height [mm]

Sk – Duct cross-section [m²]

dp – Pressure drop [Pa]

Se – Damper active cross-section [m²]

L_{W/A} – Damper noise level [dB]

		H [mm]															
		1300						1400					1500				
		v [m/s]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]	Sk [m²]	Se [m²]	Q [m³/h]	dp [Pa]	L _{WA} [dB]
B [mm]	200	4	0.260	0.249	3 588	4	30	0.280	0.269	3 876	4	29	0.300	0.289	4 164	4	29
		6			5 383	9	40			5 815	9	40			6 247	9	40
		8			7 177	17	48			7 753	16	47			8 329	15	47
		10			8 971	26	53			9 691	25	53			10 411	24	53
	250	4	0.325	0.312	4 486	4	31	0.350	0.337	4 846	4	30	0.375	0.362	4 164	4	30
		6			6 728	9	41			7 268	9	40			6 247	8	40
		8			8 971	17	49			9 691	15	48			8 329	15	48
		10			11 214	26	54			12 114	24	54			10 411	23	53
	300	4	0.390	0.374	5 383	4	31	0.420	0.404	5 815	4	31	0.450	0.434	6 247	4	30
		6			8 074	9	41			8 722	9	41			9 370	8	40
		8			10 765	16	49			11 629	15	49			12 493	14	48
		10			13 457	25	55			14 537	24	54			15 617	22	54
	350	4	0.455	0.436	6 280	4	30	0.490	0.471	6 784	3	30	0.525	0.506	7 288	3	30
		6			9 420	8	41			10 176	8	40			10 932	8	40
		8			12 560	15	48			13 568	13	48			14 576	13	48
		10			15 700	23	54			16 960	21	53			18 220	21	54
	400	4	0.520	0.498	7 177	3	29	0.560	0.538	7 753	3	29	0.600	0.578	8 329	3	30
		6			10 765	7	40			11 629	7	40			12 493	7	40
		8			14 354	13	47			15 506	13	48			16 658	13	48
		10			17 942	20	53			19 382	20	53			20 822	20	54
450	4	0.585	0.561	8 074	3	29	0.630	0.606	8 722	3	29	0.675	0.651	9 370	3	30	
	6			12 111	7	40			13 083	7	40			14 055	7	40	
	8			16 148	12	47			17 444	12	47			18 740	12	48	
	10			20 185	19	53			21 805	19	53			23 425	19	53	
500	4	0.650	0.623	8 971	3	29	0.700	0.673	9 691	3	30	0.750	0.723	10 411	3	30	
	6			13 457	7	40			14 537	7	40			15 617	7	41	
	8			17 942	12	48			19 382	12	48			20 822	12	48	
	10			22 428	19	53			24 228	19	54			26 028	19	54	
550	4	0.715	0.685	9 868	3	30	0.770	0.740	10 660	3	30	0.825	0.795	11 452	3	31	
	6			14 802	7	40			15 990	7	41			17 178	7	41	
	8			19 737	12	48			21 321	12	48			22 905	12	49	
	10			24 671	19	54			26 651	19	54			28 631	19	54	
600	4	0.780	0.748	10 765	3	29	0.840	0.808	11 629	3	29	0.900	0.868	12 493	3	29	
	6			16 148	6	39			17 444	6	40			18 740	6	40	
	8			21 531	11	47			23 259	11	47			24 987	11	48	
	10			26 914	17	53			29 074	17	53			31 234	17	53	
650	4	0.845	0.810	11 663	3	29	0.910	0.875	12 599	3	29	0.975	0.940	13 535	3	30	
	6			17 494	6	40			18 898	6	40			20 302	6	40	
	8			23 325	11	47			25 197	11	48			27 069	11	48	
	10			29 156	17	53			31 496	17	53			33 836	17	54	
700	4	0.910	0.872	12 560	2	28	0.980	0.942	13 568	2	28	1.050	1.012	14 576	2	28	
	6			18 840	5	38			20 352	5	39			21 864	5	39	
	8			25 119	10	46			27 135	10	46			29 151	10	47	
	10			31 399	15	52			33 919	15	52			36 439	15	52	
800	4	1.040	0.997	14 354	2	28	1.120	1.077	15 506	2	29	1.200	1.157	16 658	2	29	
	6			21 531	5	39			23 259	5	39			24 987	5	40	
	8			28 708	10	46			31 012	10	47			33 316	10	47	
	10			35 885	15	52			38 765	15	53			41 645	15	53	
900	4	1.170	1.121	16 148	2	29	1.260	1.211	17 444	2	29	1.350	1.301	18 740	2	30	
	6			24 222	5	39			26 166	5	40			28 110	5	40	
	8			32 296	10	47			34 888	10	47			37 480	10	48	
	10			40 370	15	53			43 610	15	53			46 850	15	53	
1000	4	1.300	1.246	17 942	2	28	1.400	1.346	19 382	2	28	1.500	1.446	20 822	2	28	
	6			26 914	5	39			29 074	5	38			31 234	5	39	
	8			35 885	9	47			38 765	8	46			41 645	8	46	
	10			44 856	14	52			48 456	13	52			52 056	13	52	
1100	4	1.430	1.371	19 737	2	29	1.540	1.481	21 321	2	27	1.650	1.591	22 905	2	26	
	6			29 605	5	39			31 981	4	38			34 357	4	37	
	8			39 473	9	47			42 641	8	45			45 809	7	44	
	10			49 342	14	53			53 302	12	51			57 262	11	50	
1200	4	1.560	1.495	21 531	2	28	1.680	1.615	23 259	2	28	1.800	1.735	24 987	2	26	
	6			32 296	5	39			34 888	4	38			37 480	4	36	
	8			43 062	8	46			46 518	8	46			49 974	6	44	
	10			53 827	13	52			58 147	12	51			62 467	10	49	
1300	4	1.690	1.620	23 325	2	28	1.820	1.750	25 197	2	27						
	6			34 988	4	38			37 796	4	37						
	8			46 650	8	46			50 394	7	45						
	10			58 313	12	51			62 993	11	51						
1400	4	1.820	1.744	25 119	2	28											
	6			37 679	4	39											
	8			50 239	8	46											
	10			62 798	12	52											