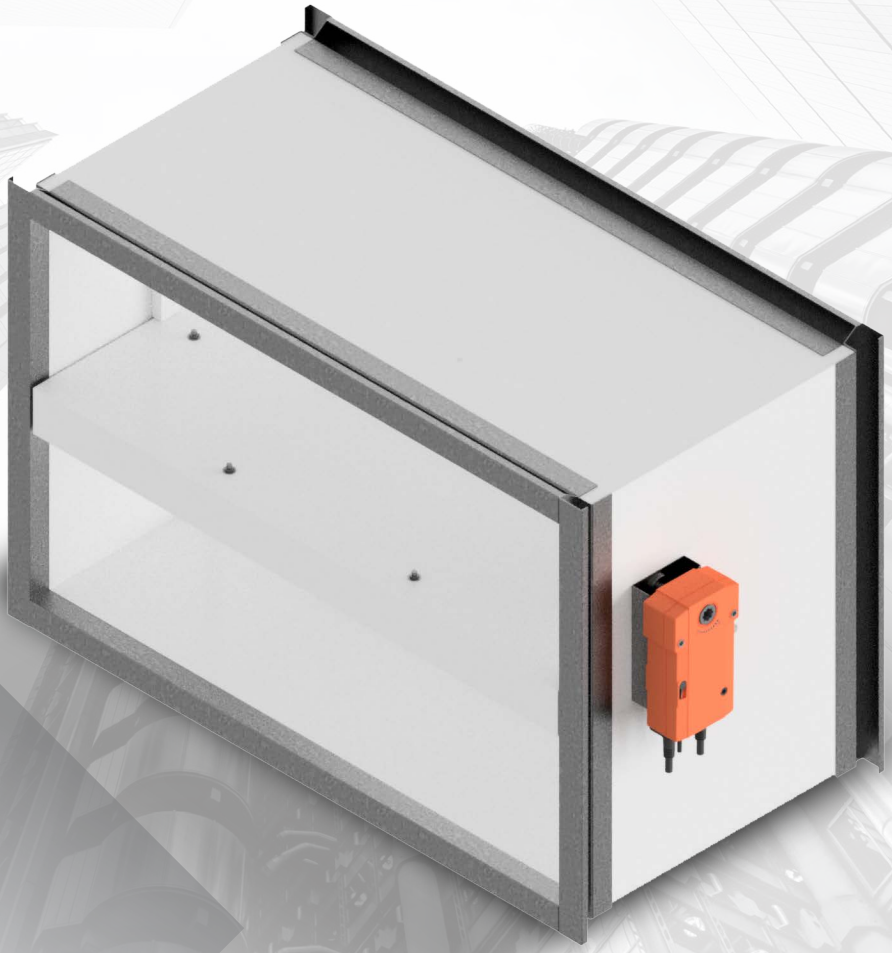
mercor group

PRODUCT BROCHURE
mcr FID 240



mercor group

over **30 000 m2** **of production space**

located on **16 ha** of plots housing **7** **production facilities**

- mercor
- DFM DOORS
- ELMECH-ASE
- mcr SOL ENERGY
- mercor Fire Protection UK
- mercor Czech Republic
- mercor Україна
- mercor Slovakia
- mercor Romania
- mercor tecresa
- mercor dunamenti

4 **product divisions:**

- » gravitational smoke exhaust
- » fire ventilation
- » building structure protections
- » fire partitions provided by DFM Doors company

over **750** **people working** for the Mercor Group

Stable
technological advancement
automation, software and production management intelligent solutions

10 **subsidiaries** supplying over **50** **markets worldwide**

production supported by IT systems
i.e. ERP Vault and trademark Shop Floor Software

MERCOR GROUP
FOR OVER 30 YEARS
WE PROVIDE INFALLIBLE SOLUTIONS IN THE FIELD
OF PASSIVE FIRE PROTECTION

We are one of the biggest entities specializing in passive fire protection in Poland. Our international corporate group continues to be on the forefront of the specialized European market. We offer wide range of products: smoke and heat exhaust systems, rooflights, fire ventilation as well as fire-resistant forms of building protection. Our clients are provided with a full service care.

For over 30 years we've been dealing in safety. Our portfolio includes hundreds of projects, in Poland and abroad. Combining vast experience with innovative solutions we are able to confront the challenges posed by the modern standards in construction.

We are a public company. Since July 2007 "MERCOR" S.A. stocks are listed on the Warsaw Stock Exchange.

We strive for extensiveness of service and work in strict cooperation with designers and contractors. We can help you choose and design fire protection systems using our own products, provide transportation to the construction site, install as well as service them ensuring a long-time functionality.

Most of our products are custom made: every client can decide on suitable parameters within safety protocols and imposed regulations.

TABLE OF CONTENTS

FIRE DAMPERS

Low-resistance circular single-blade cut-off fire damper

mcr FID PRO

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in comfort ventilation systems

Single-blade cut-off fire circular damper for comfort ventilation systems

mcr FID S/S p/O

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems. Optional EX version.

Low-resistance single-blade fire damper for comfort ventilation systems

mcr FID S/S c/P

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems. Optional EX version.

Single-blade cut-off fire damper for comfort ventilation systems

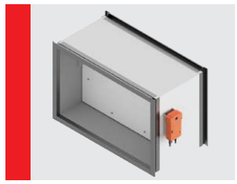
mcr FID S/S p/P

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems. Optional EX version.

Low-resistance single-blade fire damper

mcr FID 240

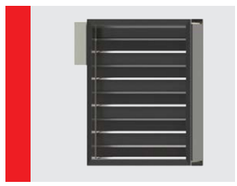


class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems, in points of contact with vertical building partitions.

Multi-blade cut-off fire damper for comfort ventilation systems

mcr WIP/S



class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems. Optional EX version.

Multi-blade cut-off fire damper for comfort ventilation systems

mcr WIP PRO/S

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems. Optional EX version.

Cut-off fire dampers for comfort ventilation systems

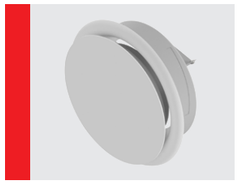
mcr FID WING

class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in general ventilation systems, in points of contact with vertical and horizontal building partitions.

Cut-off fire valve

mcr ZIPP

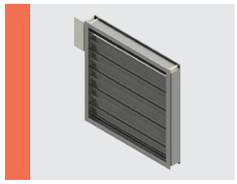


class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Used to separate danger zones from the rest of the building and transfer air through the building partitions.

Multi-blade transfer and relief fire damper

mcr WIP/T

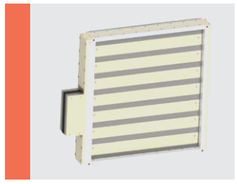


class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in fire and comfort ventilation systems. Optional EX version.

Multi-blade transfer fire damper

mcr WIP PRO/T



class **EN 15650**
fire-resistance **EN 1366-2**
fire class **EN 13501-3**

Intended for installation in fire ventilation systems.

Single-blade smoke control damper for multi-zone fire ventilation systems

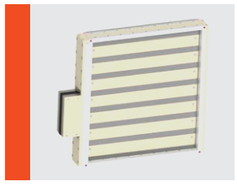
mcr WIP/V

class **EN 12101-8**
fire-resistance **EN 1366-10**
fire class **EN-13501-4**

Intended for installation in fire ventilation systems.

Multi-blade smoke control damper for multi-zone fire ventilation systems

mcr WIP PRO/V

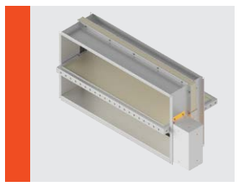


class **EN 12101-8**
fire-resistance **EN 1366-10**
fire class **EN-13501-4**

Intended for installation in fire ventilation systems.

Multi-blade smoke control damper for multi-zone fire ventilation systems

mcr FID S/V p/P

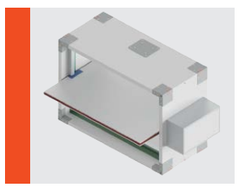


class **EN 12101-8**
fire-resistance **EN 1366-10**
fire class **EN-13501-4**

Intended for installation in fire ventilation systems.

Single-blade cut-off fire damper for multi-zone fire ventilation systems

mcr FID B



class **EN 12101-8**
fire-resistance **EN 1366-10**
fire class **EN-13501-4**

Intended for installation in fire ventilation systems.

Door-type smoke and intake damper

mcr DOR

class **EN 12101-8**
fire-resistance **EN 1366-10**
fire class **EN-13501-4**

Intended for installation in supply and smoke exhaust ventilation systems.

ATEST HIGIENICZNY

1391-CPR-2021/0123

Constancy of performance certificate **1391-CPR-2021/0123**

Dampers certified for compliance with **EN 15650**

Classified qualified under **EN 13501-3** and tested under **EN 1366-2**

Cut-off fire dampers with constant resistance **regardless of air flow direction or positioning**

Wide active surface of up to **0,7 m2**

Installation in minimum **od 150mm thick walls**

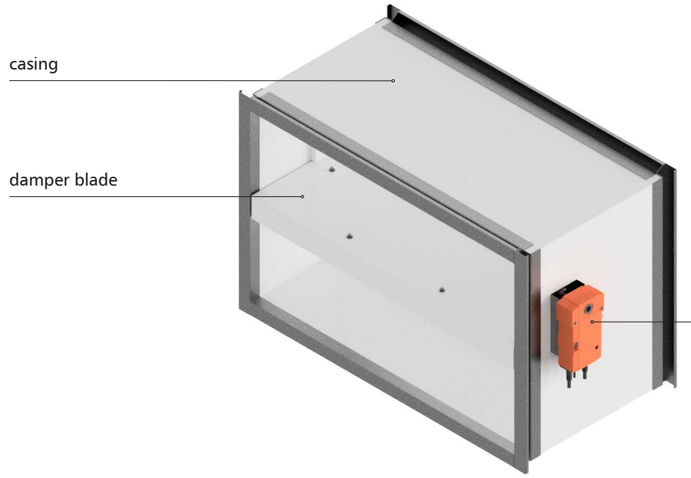
Certified drywall **installation**

1 APPLICATION

Cut-off fire dampers mcr FID 240 are intended to be installed as part of a general ventilation system in points of contact with vertical building partitions. They preserve the fire-resistance of ventilation and air conditioning ducts located within during fires. Simultaneously preventing flames, smoke and fire gases from accessing the rest of the building. In normal circumstances the blade remains open, automatically closing in case of fire.

Dampers cannot work properly in dustiness-prone spaces, unless subjected to the special, individually fitted servicing and technical inspection regimen.

2 DESIGN



BIM CAD

models can be downloaded from the website in the designer zone tab

Cut-off mcr FID 240 dampers consist of a casing with a rectangular cross-section made of fire-resistant panels, a moving blade and an actuator activated either remotely or automatically thanks to a thermoelectric trigger.

Total length of the casing can amount to 310-460 mm depending on the height of the damper. The blade is made of 60mm-thick fire-resistant panel. On the inner side a sealing system can found. Additionally, stop profiles are fastened to limit the motions of the blade. Damper is typically equipped with steel flange allowing for adding masking grilles or connecting steel ventilation ducts.

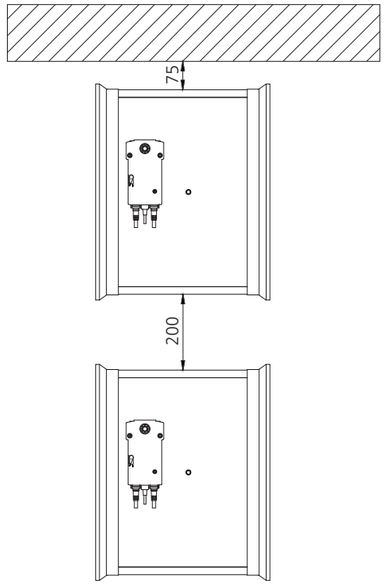
3 VERSIONS

3.1 Opening and closing vents with an actuator

In normal circumstances the damper blade remains open. In case of fire the blade closes automatically or is closed remotely when the power supply is cut off.

The mcr FID 240 dampers are equipped with an axial actuator with a **BFL, BFN, BF-TL** return spring, powered by 24 V AC/DC or 230 V AC, with thermoelectric trigger set to 72°C (optionally it is possible to use triggers with the nominal tripping temperature of 95°C). The actuators are equipped with limit switches used to monitor the blade position. Furthermore, the mechanical position indicator is placed on the actuator.
The thermoelectric trigger is equipped with a test switch.
Dampers with analogue actuators: BFL, BFN or digital BF-TL close thanks to a thermoelectric trigger or power supply cut-off as a result of activating the return spring. The dampers open when the power supply voltage is applied to the actuator terminals. Furthermore, dampers with this kind of actuators can be also opened manually with a key. In case of fire the damper blade in the fire area opens while remaining closed in the rest of the building - everything happens remotely by supplying voltage.

3.2 Distance between the installation and partitions



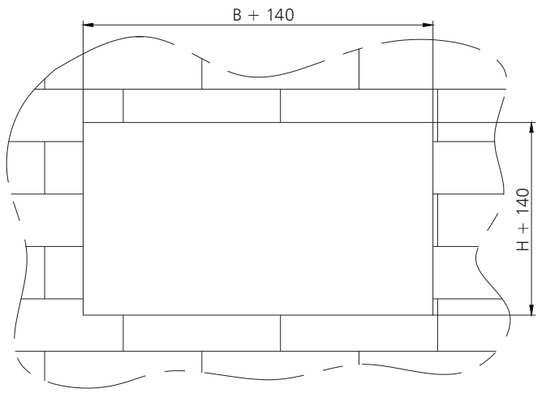
dimensions in [mm]

4 INSTALLATION

The mcr FID 240 rectangular dampers have been assigned class EI240(ve i o)S. They can be installed in concrete partitions of min. 150mm thickness, solid brick or cellular concrete blocks of min. 150mm thickness and resistance class of at least EI240.

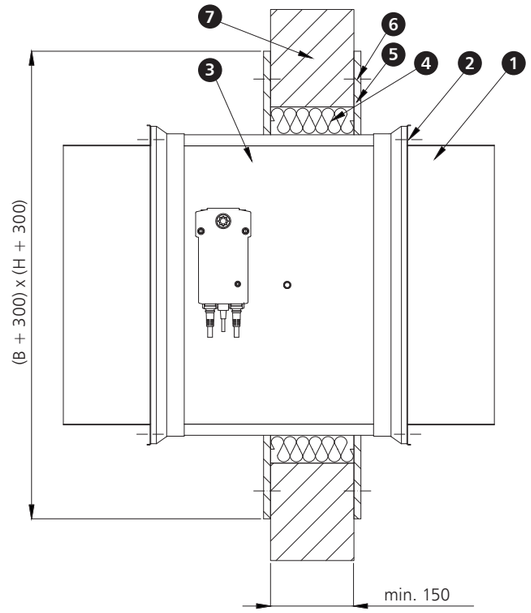
4.1 mcr FID 240 damper installation

» **optimal opening**



dimensions in [mm]

4.2 Sample installation in brick and concrete walls



1. Ventilation duct
2. Sheet metal screw ST4.2x16
3. mcr FID 240 damper BxH
4. Sealing - mineral wool*
5. Gypsum board along the sleeve BxH
6. Installation anchor
7. Wall

dimensions in [mm]

5 DESIGNATION

mcr FID 240 / B x H / 1 / 2

- damper type
- width x hight/ diameter (nominal)
- control
- additional parameters

Caution: additional parameters have to be separated by a "/" symbol

sample designation:
mcr FID 240/S /500 x 600 /BFL 24-T
Cut-off damper EIS240 with a 24 V actuator with limit switches

1 - control:

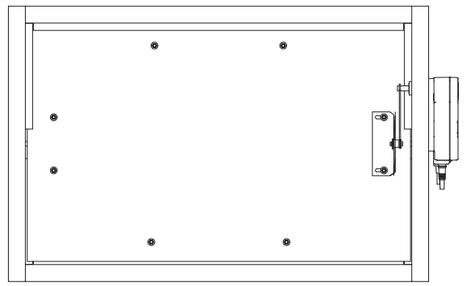
» **trigger control mechanism, axial actuator**
BF24TL-T-ST (with the BKN230-24MP option) – actuator with a return spring, U = 24 V, MP Bus digital control
BFL 24-T / BFL 24-SR-T – actuator with a return spring, U = 24 V AC/DC
BFL230-T – actuator with a return spring, U = 230 V AC
BFL24-T-ST (with the BKN230-24MP option) – actuator with a return spring for the SBS Control system
BFN 24-T / BFN 24-SR-T – actuator with a return spring, U = 24 V AC/DC
BFN230-T – actuator with a return spring, U = 230 V AC
BFN24-T-ST (with the BKN230-24MP option) – actuator with a return spring, for the SBS Control system

2 - additional parameters:

» **thermoelectric and thermal triggers**
[no symbol] – trigger set to 72°C
ZBAT95 – thermoelectric trigger set to 95°C

5.1 Standard construction

» **right damper**
- standard



6 TECHNICAL PARAMETERS OF MCR FID 240 RECTANGULAR DAMPERS

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

		hight H [mm]															
		200					250					300					
	v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm] 200	4	0,040	0,022	317	11	31	0,050	0,031	450	9	31	0,06	0,041	583	8	31
	6			475	24	42			675	21	41			875	19	41
	8			634	43	49			900	37	49			1 166	33	49
	10			792	67	55			1 125	58	55			1 458	52	54
250	4	0,050	0,028	407	11	32	0,063	0,040	576	9	32	0,075	0,052	745	8	32
	6			610	24	43			864	21	43			1 118	19	42
	8			814	42	50			1 152	37	50			1 490	33	50
	10			1 017	66	56			1 440	58	56			1 863	52	56
300	4	0,060	0,035	497	11	33	0,000	0,049	702	9	33	0,09	0,063	907	8	33
	6			745	24	44			1 053	21	43			1 361	19	43
	8			994	42	51			1 404	37	51			1 814	33	51
	10			1 242	66	57			1 755	58	57			2 268	52	56
350	4	0,070	0,041	587	10	34	0,088	0,058	828	9	34	0,105	0,074	1 069	8	32
	6			880	23	44			1 242	21	44			1 604	17	43
	8			1 174	41	52			1 656	37	52			2 138	31	50
	10			1 467	64	57			2 070	58	57			2 673	48	56
400	4	0,080	0,047	677	10	34	0,100	0,066	954	8	33	0,12	0,086	1 231	8	33
	6			1 015	22	44			1 431	19	44			1 847	17	44
	8			1 354	40	52			1 908	34	51			2 462	31	51
	10			1 692	62	58			2 385	53	57			3 078	48	57
450	4	0,090	0,053	767	10	34	0,113	0,075	1 080	8	34	0,135	0,097	1 393	8	34
	6			1 150	22	45			1 620	19	44			2 090	17	44
	8			1 534	40	52			2 160	34	52			2 786	31	52
	10			1 917	62	58			2 700	53	57			3 483	48	57
500	4	0,100	0,060	857	11	37	0,125	0,084	1 206	8	34	0,15	0,108	1 555	8	34
	6			1 285	26	47			1 809	18	44			2 333	17	45
	8			1 714	46	55			2 412	32	52			3 110	31	52
	10			2 142	71	60			3 015	51	57			3 888	48	58
550	4	0,110	0,066	947	10	35	0,138	0,093	1 332	7	33	0,165	0,119	1 717	7	34
	6			1 420	22	46			1 998	17	43			2 576	17	44
	8			1 894	40	53			2 664	29	51			3 434	29	52
	10			2 367	62	59			3 330	46	57			4 293	46	58
600	4	0,120	0,072	1 037	10	36	0,150	0,101	1 458	7	33	0,18	0,131	1 879	6	32
	6			1 555	22	46			2 187	17	44			2 819	15	43
	8			2 074	40	54			2 916	29	51			3 758	26	51
	10			2 592	62	59			3 645	46	57			4 698	40	56
650	4	0,130	0,078	1 127	10	36	0,163	0,110	1 584	7	33	0,195	0,142	2 041	7	35
	6			1 690	22	46			2 376	17	44			3 062	17	45
	8			2 254	40	54			3 168	29	52			4 082	29	53
	10			2 817	62	60			3 960	46	57			5 103	46	58
700	4	0,140	0,085	1 217	10	36	0,175	0,119	1 710	7	34	0,21	0,153	2 203	7	35
	6			1 825	22	46			2 565	17	44			3 305	17	45
	8			2 434	38	54			3 420	29	52			4 406	29	53
	10			3 042	60	60			4 275	46	58			5 508	46	59

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

		hight H [mm]															
		200					250					300					
	v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm] 750	4	0,150	0,091	1 307	10	36	0,188	0,128	1 836	7	34	0,225	0,164	2 365	7	35
	6			1 960	22	47			2 754	17	45			3 548	17	46
	8			2 614	38	54			3 672	29	52			4 730	29	53
	10			3 267	60	60			4 590	46	58			5 913	46	59
800	4	0,160	0,097	1 397	9	36	0,200	0,136	1 962	7	34	0,24	0,176	2 527	7	35
	6			2 095	21	46			2 943	17	45			3 791	17	46
	8			2 794	37	54			3 924	29	52			5 054	29	54
	10			3 492	58	60			4 905	46	58			6 318	46	59
850	4	0,170	0,103	1 487	8	35	0,213	0,145	2 088	6	32	0,255	0,187	2 689	6	32
	6			2 230	19	45			3 132	14	43			4 034	13	43
	8			2 974	33	53			4 176	24	50			5 378	23	50
	10			3 717	52	59			5 220	38	56			6 723	36	56
900	4	0,180	0,110	1 577	8	35	0,225	0,154	2 214	6	32	0,27	0,198	2 851	6	33
	6			2 365	19	46			3 321	14	43			4 277	13	44
	8			3 154	33	53			4 428	24	50			5 702	24	51
	10			3 942	52	59			5 535	38	56			7 128	37	57
960	4	0,192	0,117	1 685	8	35	0,240	0,164	2 365	6	33	0,288	0,212	3 046	6	33
	6			2 527	19	46			3 548	14	43			4 568	13	44
	8			3 370	33	53			4 730	24	51			6 091	24	51
	10			4 212	52	59			5 913	38	57			7 614	37	57

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

			hight H [mm]														
			350					400				450					
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm]	200	4	0,070	0,050	716	8	30	0,080	0,059	850	6	29	0,090	0,068	983	7	31
		6			1 075	17	41			1 274	15	40			1 474	17	42
		8			1 433	30	48			1 699	26	47			1 966	30	50
		10			1 791	47	54			2 124	40	53			2 457	46	55
	250	4	0,088	0,064	914	7	30	0,100	0,075	1 084	6	30	0,113	0,087	1 253	7	33
		6			1 372	15	40			1 625	15	41			1 879	17	43
		8			1 829	27	48			2 167	26	48			2 506	30	51
		10			2 286	41	54			2 709	40	54			3 132	46	56
	300	4	0,105	0,077	1 112	7	31	0,120	0,092	1 318	6	31	0,135	0,106	1 523	7	33
		6			1 669	15	41			1 976	15	41			2 284	16	44
		8			2 225	27	49			2 635	26	49			3 046	29	51
		10			2 781	41	54			3 294	40	55			3 807	45	57
	350	4	0,123	0,091	1 310	7	31	0,140	0,108	1 552	6	32	0,158	0,125	1 793	7	33
		6			1 966	15	42			2 327	15	42			2 689	16	44
		8			2 621	27	49			3 103	26	50			3 586	28	51
		10			3 276	41	55			3 879	40	55			4 482	44	57
	400	4	0,140	0,105	1 508	6	30	0,160	0,124	1 786	6	31	0,180	0,143	2 063	7	34
		6			2 263	13	41			2 678	13	42			3 094	15	44
		8			3 017	24	48			3 571	24	49			4 126	27	52
		10			3 771	37	54			4 464	37	55			5 157	42	57
	450	4	0,158	0,119	1 706	7	33	0,180	0,140	2 020	6	32	0,203	0,162	2 333	6	32
		6			2 560	15	43			3 029	13	42			3 499	13	43
		8			3 413	27	51			4 039	24	50			4 666	24	50
		10			4 266	43	57			5 049	37	55			5 832	37	56
	500	4	0,175	0,132	1 904	6	33	0,200	0,157	2 254	6	31	0,225	0,181	2 603	6	32
		6			2 857	15	43			3 380	12	42			3 904	12	42
		8			3 809	26	51			4 507	22	49			5 206	22	50
		10			4 761	40	56			5 634	35	55			6 507	34	56
	550	4	0,193	0,146	2 300	6	33	0,220	0,173	2 488	5	30	0,248	0,200	2 873	6	32
		6			3 451	15	44			3 731	11	40			4 309	12	43
		8			4 601	26	51			4 975	19	48			5 746	22	50
		10			5 751	40	57			6 219	30	54			7 182	34	56
	600	4	0,210	0,160	2 300	5	31	0,240	0,189	2 722	5	30	0,270	0,218	3 143	6	33
		6			3 451	12	41			4 082	9	39			4 714	12	43
		8			4 601	21	49			5 443	16	46			6 286	22	51
		10			5 751	33	55			6 804	25	52			7 857	34	56
	650	4	0,228	0,174	2 498	5	31	0,260	0,205	2 956	4	28	0,293	0,237	3 413	5	31
		6			3 748	12	42			4 433	9	39			5 119	10	41
		8			4 997	21	49			5 911	16	46			6 826	19	49
		10			6 246	33	55			7 389	25	52			8 532	29	55
	700	4	0,245	0,187	2 696	5	32	0,28	0,222	3 190	4	29	0,315	0,256	3 683	5	31
		6			4 045	12	42			4 784	9	39			5 524	10	42
		8			5 393	21	50			6 379	16	47			7 366	19	49
		10			6 741	33	55			7 974	25	53			9 207	29	55

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

			hight H [mm]														
			350					400				450					
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm]	750	4	0,263	0,201	2 894	5	31	0,3	0,238	3 424	4	29	0,338	0,275	3 953	5	31
		6			4 342	12	42			5 135	9	40			5 929	10	42
		8			5 789	21	49			6 847	16	47			7 906	19	50
		10			7 236	32	55			8 559	25	53			9 882	29	55
	800	4	0,280	0,215	3 092	5	32	0,32	0,254	3 658	4	29	0,360	0,293	4 223	5	31
		6			4 639	12	42			5 486	9	40			6 334	10	41
		8			6 185	21	50			7 315	16	47			8 446	19	49
		10			7 731	32	56			9 144	25	53			10 557	29	55
	850	4	0,298	0,229	3 290	5	32	0,34	0,270	3 892	5	32	0,383	0,312	4 493	5	31
		6			4 936	12	43			5 837	11	42			6 739	10	41
		8			6 581	21	50			7 783	19	50			8 986	19	49
		10			8 226	32	56			9 729	30	56			11 232	29	55
	900	4	0,315	0,242	3 488	6	34	0,360	0,287	4 126	7	37	0,405	0,331	4 763	5	31
		6			5 233	14	45			6 188	14	46			7 144	10	41
		8			6 977	24	52			8 251	30	56			9 526	19	49
		10			8 721	38	58			10 314	38	59			11 907	29	55
	960	4	0,336	0,259	3 726	5	32	0,384	0,306	4 406	5	32	0,432	0,353	5 087	5	31
		6			5 589	11	42			6 610	11	43			7 630	10	41
		8			7 452	19	50			8 813	19	50			10 174	19	49
		10			9 315	30	55			11 016	30	56			12 717	29	55

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

			hight H [mm]														
			500					550					600				
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm]	200	4	0,1	0,078	1 116	6	30	0,110	0,087	1 249	6	30	0,120	0,096	1 382	6	30
		6			1 674	15	41			1 874	14	40			2 074	13	41
		8			2 232	26	48			2 498	24	48			2 765	24	48
		10			2 790	40	54			3 123	38	54			3 456	37	54
	250	4	0,125	0,099	1 422	6	31	0,138	0,111	1 591	6	31	0,150	0,122	1 760	6	31
		6			2 133	15	42			2 387	14	42			2 641	13	42
		8			2 844	26	49			3 182	24	49			3 521	24	49
		10			3 555	40	55			3 978	38	55			4 401	37	55
	300	4	0,15	0,120	1 728	6	31	0,165	0,134	1 933	6	31	0,180	0,149	2 138	6	31
		6			2 592	14	42			2 900	13	42			3 208	12	42
		8			3 456	24	49			3 866	24	49			4 277	22	49
		10			4 320	38	55			4 833	37	55			5 346	35	55
	350	4	0,175	0,141	2 034	6	32	0,193	0,158	2 275	6	32	0,210	0,175	2 516	5	31
		6			3 051	13	42			3 413	13	43			3 775	12	42
		8			4 068	24	50			4 550	24	50			5 033	21	49
		10			5 085	37	55			5 688	37	56			6 291	33	55
	400	4	0,2	0,163	2 340	6	31	0,220	0,182	2 617	5	31	0,240	0,201	2 894	5	31
		6			3 510	12	42			3 926	12	42			4 342	12	42
		8			4 680	22	49			5 234	21	49			5 789	21	49
		10			5 850	35	55			6 543	33	55			7 236	32	55
	450	4	0,225	0,184	2 646	5	30	0,248	0,206	2 959	5	31	0,270	0,227	3 272	5	31
		6			3 969	11	41			4 439	11	41			4 909	11	42
		8			5 292	19	48			5 918	19	49			6 545	19	49
		10			6 615	30	54			7 398	30	54			8 181	30	55
	500	4	0,250	0,205	2 952	4	28	0,275	0,229	3 301	4	30	0,300	0,254	3 650	4	30
		6			4 428	9	39			4 952	10	41			5 476	10	41
		8			5 904	16	46			6 602	18	48			7 301	18	48
		10			7 380	23	51			8 253	28	54			9 126	28	54
	550	4	0,275	0,226	3 564	4	28	0,303	0,253	3 985	4	29	0,330	0,280	4 406	4	30
		6			5 346	9	39			5 978	9	40			6 610	9	40
		8			7 128	15	46			7 970	16	47			8 813	16	48
		10			8 910	24	52			9 963	25	53			11 016	25	54
	600	4	0,3	0,248	3 564	4	29	0,330	0,277	3 985	4	29	0,360	0,306	4 406	4	29
		6			5 346	9	39			5 978	9	40			6 610	9	40
		8			7 128	15	47			7 970	15	47			8 813	15	48
		10			8 910	24	52			9 963	24	53			11 016	24	53
	650	4	0,325	0,269	3 870	5	31	0,358	0,301	4 327	4	29	0,390	0,332	4 784	4	30
		6			5 805	10	42			6 491	9	40			7 177	9	40
		8			7 740	19	49			8 654	15	47			9 569	15	48
		10			9 675	24	53			10 818	24	53			11 961	24	54
	700	4	0,350	0,290	4 176	4	29	0,385	0,324	4 669	4	30	0,420	0,359	5 162	4	30
		6			6 264	9	40			7 004	9	40			7 744	9	41
		8			8 352	15	47			9 338	15	48			10 325	15	48
		10			10 440	24	53			11 673	24	54			12 906	24	54

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

			hight H [mm]														
			500					550					600				
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
width B [mm]	750	4	0,375	0,311	4 482	4	30	0,413	0,348	5 011	4	29	0,450	0,385	5 540	4	30
		6			6 723	9	40			7 517	8	40			8 311	8	40
		8			8 964	15	48			10 022	15	47			11 081	15	48
		10			11 205	24	53			12 528	23	53			13 851	23	54
	800	4	0,4	0,333	4 788	4	30	0,440	0,372	5 353	4	30	0,480	0,411	5 918	3	29
		6			7 182	9	40			8 030	8	40			8 878	7	39
		8			9 576	15	48			10 706	15	48			11 837	13	47
		10			11 970	24	53			13 383	23	54			14 796	21	53
	850	4	0,425	0,354	5 094	46	62	0,468	0,396	5 695	4	29	0,510	0,437	6 296	3	28
		6			7 641	104	72			8 543	8	40			9 445	7	39
		8			10 188	185	80			11 390	14	47			12 593	13	46
		10			12 735	289	86			14 238	22	53			15 741	20	52
	900	4	0,45	0,375	5 400	4	30	0,495	0,419	6 037	3	29	0,540	0,464	6 674	3	29
		6			8 100	9	40			9 056	7	39			10 012	7	36
		8			10 800	15	48			12 074	13	47			13 349	13	44
		10			13 500	24	53			15 093	21	53			16 686	20	49
	960	4	0,48	0,401	5 767	4	29	0,528	0,448	6 037	3	28	0,576	0,495	7 128	3	28
		6			8 651	8	39			9 056	7	38			10 692	7	39
		8			11 534	15	47			12 074	12	46			14 256	12	46
		10			14 418	23	53			15 093	18	51			17 820	18	52

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

width B [mm]	hight H [mm]	650					700					800				
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
	200	4	0,130	0,105	1 516	6	30	0,140	0,115	1 649	6	30	0,152	0,145	2 081	6	31
		6			2 273	13	40			2 473	13	41			3 121	13	42
		8			3 031	23	48			3 298	23	48			4 162	23	49
		10			3 789	36	54			4 122	36	54			5 202	36	55
	250	4	0,163	0,134	1 930	6	31	0,175	0,146	2 099	6	31	0,190	0,181	2 601	6	32
		6			2 894	13	42			3 148	13	42			3 902	13	43
		8			3 859	23	49			4 198	23	49			5 202	23	50
		10			4 824	36	55			5 247	36	55			6 503	36	56
	300	4	0,195	0,163	2 344	5	31	0,210	0,177	2 549	5	31	0,228	0,217	3 121	5	32
		6			3 515	12	42			3 823	12	41			4 682	12	42
		8			4 687	21	49			5 098	21	49			6 242	21	50
		10			5 859	33	55			6 372	32	55			7 803	32	56
	350	4	0,228	0,192	2 758	5	31	0,245	0,208	2 999	5	31	0,266	0,253	3 641	5	32
		6			4 136	12	42			4 498	11	42			5 462	11	43
		8			5 515	21	49			5 998	20	49			7 283	20	50
		10			6 894	32	55			7 497	31	55			9 104	31	56
	400	4	0,260	0,220	3 172	5	32	0,280	0,240	3 449	5	32	0,304	0,289	4 162	5	33
		6			4 757	12	42			5 173	11	42			6 242	11	43
		8			6 343	21	50			6 898	20	50			8 323	20	51
		10			7 929	32	56			8 622	31	56			10 404	31	56
	450	4	0,293	0,249	3 586	5	31	0,315	0,271	3 899	4	31	0,342	0,325	4 682	4	31
		6			5 378	11	42			5 848	10	41			7 023	10	42
		8			7 171	19	49			7 798	18	49			9 364	18	50
		10			8 964	30	55			9 747	28	55			11 705	28	55
	500	4	0,325	0,278	4 000	4	31	0,350	0,302	4 349	4	31	0,380	0,361	5 202	4	31
		6			5 999	10	41			6 523	10	41			7 803	10	42
		8			7 999	18	49			8 698	17	49			10 404	17	49
		10			9 999	28	55			10 872	26	54			13 005	26	55
	550	4	0,358	0,307	4 828	4	30	0,385	0,333	4 799	4	30	0,418	0,397	5 722	4	31
		6			7 241	9	41			7 198	9	41			8 583	9	42
		8			9 655	16	48			9 598	16	49			11 444	16	49
		10			12 069	25	54			11 997	25	54			14 306	25	55
	600	4	0,390	0,335	4 828	4	30	0,420	0,365	5 249	4	30	0,456	0,434	6 242	4	31
		6			7 241	9	40			7 873	9	41			9 364	9	42
		8			9 655	15	48			10 498	15	48			12 485	15	49
		10			12 069	24	54			13 122	24	54			15 606	24	55
	650	4	0,423	0,364	5 242	4	30	0,455	0,396	5 699	4	30	0,494	0,470	6 763	4	30
		6			7 862	8	40			8 548	8	41			10 144	8	41
		8			10 483	15	48			11 398	15	48			13 525	14	48
		10			13 104	23	53			14 247	23	54			16 907	22	54
	700	4	0,455	0,393	5 656	4	30	0,490	0,427	6 149	4	30	0,532	0,506	7 283	4	30
		6			8 483	8	41			9 223	8	41			10 924	8	41
		8			11 311	15	48			12 298	15	48			14 566	14	48
		10			14 139	23	54			15 372	23	54			18 207	22	54

B – nominal width [mm]
H – nominal height [mm]

v – velocity [m/s]
S_k – duct cross-section [m²]
S_e – damper active cross-section [m²]

Q – flow [m³/h]
d_p – pressure drop [Pa]
L_{WA} – damper noise level [dB]

width B [mm]	hight H [mm]	650					700					800				
		v [m/s]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]	S_k [m²]	S_e [m²]	Q [m³/h]	d_p [PA]	L_{WA} [dB]
	750	4	0,488	0,422	6 070	4	30	0,525	0,458	6 599	4	31	0,570	0,542	7 803	4	31
		6			9 104	8	41			9 898	8	41			11 705	8	41
		8			12 139	15	48			13 198	15	49			15 606	14	49
		10			15 174	23	54			16 497	23	54			19 508	22	55
	800	4	0,520	0,450	6 484	3	29	0,560	0,490	7 049	5	31	0,608	0,578	8 323	3	30
		6			9 725	7	39			10 573	8	38			12 485	7	41
		8			12 967	13	47			14 098	13	44			16 646	13	48
		10			16 209	21	53			17 622	18	48			20 808	21	54
	850	4	0,553	0,479	6 898	3	27	0,595	0,521	7 499	3	28	0,646	0,614	8 843	3	29
		6			10 346	7	38			11 248	7	39			13 265	7	40
		8			13 795	12	45			14 998	12	46			17 687	12	47
		10			17 244	18	51			18 747	18	52			22 109	18	53
	900	4	0,585	0,508	7 312	3	27	0,630	0,552	7 949	3	29	0,684	0,650	9 364	3	29
		6			10 967	7	38			11 923	7	39			14 045	7	40
		8			14 623	12	45			15 898	12	47			18 727	12	47
		10			18 279	18	51			19 872	18	52			23 409	18	53
	960	4	0,624	0,542	7 808	3	27	0,672	0,590	8 489	3	29	0,730	0,694	9 988	3	30
		6			11 713	7	38			12 733	7	39			14 982	7	40
		8			15 617	12	45			16 978	12	47			19 976	12	48
		10			19 521	18	51			21 222	18	53			24 970	18	53

7 ESTIMATED WEIGHT OF MCR FID 240 RECTANGULAR DAMPERS (KG)

hight H [mm]	width B [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000
	200	10	11	12	13	14	15	16	17	18	20	21	22	23	24	25	26
	250	11	12	13	15	16	17	18	19	20	22	23	24	25	26	27	29
	300	12	13	15	16	17	19	20	21	22	24	25	26	27	29	30	32
	350	13	15	16	17	19	20	22	23	24	26	27	28	30	31	33	34
	400	14	16	17	19	20	22	23	25	26	28	29	31	32	34	35	37
	450	15	17	19	20	22	23	25	27	28	30	31	33	35	36	38	40
	500	16	18	20	22	23	25	27	28	30	32	34	35	37	39	41	43
	550	17	19	21	23	25	27	28	30	32	34	36	38	39	41	43	45
	600	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
	650	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	51
	700	21	23	25	27	29	31	34	36	38	40	42	45	47	49	51	54
	800	22	24	26	29	31	33	36	38	40	43	45	47	50	52	54	57

HQ Gdansk
Grzegorza z Sanoka 2
80-408 Gdańsk, Poland
(+48) 58 341 42 45
(+48) 58 341 39 85
hw.export@mercor.com.pl

TRADE OFFICE Warsaw
Grzybowska 2 lok. 79
00-131 Warszawa, Poland
tel. +48 22 654 26 55
fax +48 22 654 26 47
warszawa@mercor.com.pl

TRADE OFFICE Mikolow
Kolejowa 4
43-190 Mikołów, Poland
tel. +48 32 328 43 71
fax +48 32 328 43 72
mikolow@mercor.com.pl

www.mercor.com.pl

www.facebook.com **/grupamercor/**

www.linkedin.com **/company/mercorsa/**

www.youtube.com **/user/mercorsa**