

S-MFD

**Fire and Gas-Fire Damper
SOLAS A0-A60**



SagiCofim



Features

QUALITY

Our Quality Management System has been certified in accordance with the standard ISO 9001:2015.

Our company is monitored by RINA, a member of iQNet European network, and is appointed with the quality management system certificate for the fields of activity of design and production of filter, filter systems and air distribution components for HVAC systems.

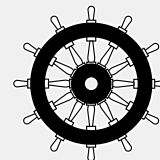
ENVIRONMENT

Being involved with the production of equipment for indoor environment control and air filtration, it is natural for SagiCofim to consider the environment protection a main commitment.

Our company has been appointed by RINA with the Environmental Management System certificate in accordance with the standard ISO 14001:2015 for design, production, and trade of air filters and systems, products for air distribution and air conditioning, heating and cooling.

MARINE EQUIPMENT DIRECTIVE

The company has been certified by RINA in accordance to the Marine Equipment Directives (MED) of the European Union for fire dampers for naval application.



ATEX



Gas leakage EN 1751, 2000Pa

- Class 2B
- Class 3C



Features

S-MFD fire dampers are supplied with electric actuator and are available for SAFE area as well as ATEX applications. Fire dampers are designed to work with a "fail-close" logic, automatically closing, in case of lack of power supply.

During normal operating life, fire dampers are open to let the air flow into the ductwork.

They can be remotely closed for testing purposes.

In case of fire, when the air temperature across the damper reaches the set point (usually 72°C, thermal fuses with different settings can be supplied on request), the integrated spring return system immediately closes the damper, to prevent the spread of flame and smoke within the air conditioning and ventilation ductwork.

Compared to the lighter S-LFD dampers, S-MFD can withstand more demanding applications, thanks to their shafts and bushes larger diameter increased up to 20 mm instead of the 12 mm equipping the S-LFD, and to the vertical bar reinforcing their frame and blades, obtaining a mechanical resistance up to 3000 Pa.

S-MFD series can perfectly replace the phased out SFD/SFDT models.



MATERIAL AND FINISH

Hot dip galvanized steel
(versions 5)

Stainless steel AISI316L
(versions 6)

DIMENSION RANGE

For H≤1000mm single damper
from 350x150mm up to 2000x1000mm

For H>1000mm matching dampers
from 350x1050mm up to 2000x2000mm

APPLICATION

- Yachts and leisure ships
- Cruise and commercial ships
- HVAC systems
- Oil&Gas offshore and onshore plants
- Engine rooms ventilation

VERSIONS

- 5 = Frame 300mm hot dip galvanized steel welded (300GW)
- 6 = Frame 300mm AISI316L welded (3006W)

OPTIONS

- **Flanges**
 - Standard flange 30mm
 - On request flange 50mm
- **Actuators**
 - Electrical
- **Solas**
 - A0
 - A60
- **Zone**
 - Safe area
 - ATEX area II 2GD h IIC TX°C (TX)
- **Leakage Class according to EN 1751**
 - Standard Class 2B
 - On request Class 3C

ACCESSORIES

- Square-to-round connections
- Junction boxes
- Open-close indicator panel
- Switches
- Thermal fuse

Technical data

SOLAS A0 frame 300mm - H ≤1000mm

SAFE AREA - ATEX AREA

Features

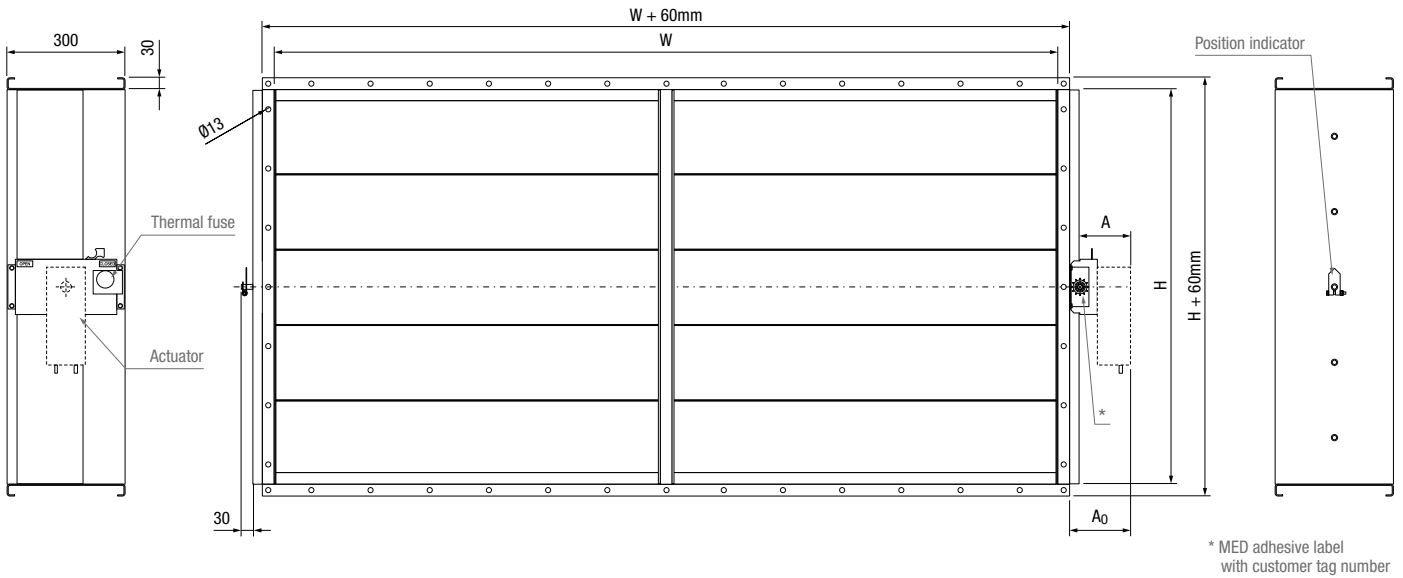
Dimensional range	from 350x150mm to 2000x1000mm step 50mm
Flange	Standard 30mm On request 50mm
Operating temperature range	-40°C / +50°C
Operating air velocity (damper in working condition)	15m/s max
Peak limits (sporadic and for a few seconds)	P=3000Pa, v=20m/s
Leakage Class acc. to EN 1751	Standard 2B On request 3C

Version 5 (300GW)		Version 6 (3006W)
Description	Material	
Casing (welded)	hot dip galv. steel - tk. 3mm	AISI316L - tk. 3mm
Blades	galv. steel Z200 double skin 1.2mm+1.2mm fiber glass gasket*	AISI316L double skin 1.2mm+1.2mm fiber glass gasket*
Shafts	AISI316 - Ø20mm	AISI316 - Ø20mm
Bushes	bronze self lub. - Ø20mm	bronze self lub. - Ø20mm
Actuator for	SAFE AREA	Belimo BF - Schischek InMax
	ATEX AREA	Schischek ExMax - RedMax

Actuator for AREA	A [mm]	A ₀ [mm]
SAFE	110	135
ATEX	130	155

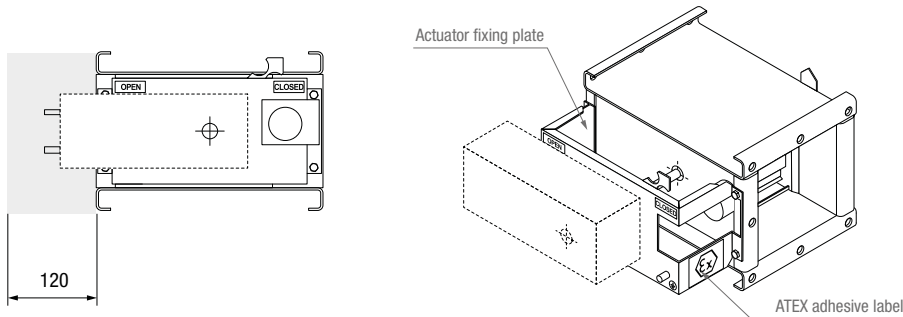
* Non-classified SVF, 20x5mm

ACTUATOR MOUNTED VERTICALLY FOR H>250mm



ACTUATOR MOUNTED HORIZONTALLY FOR H ≤250mm

Drilling scheme, see pag. 10



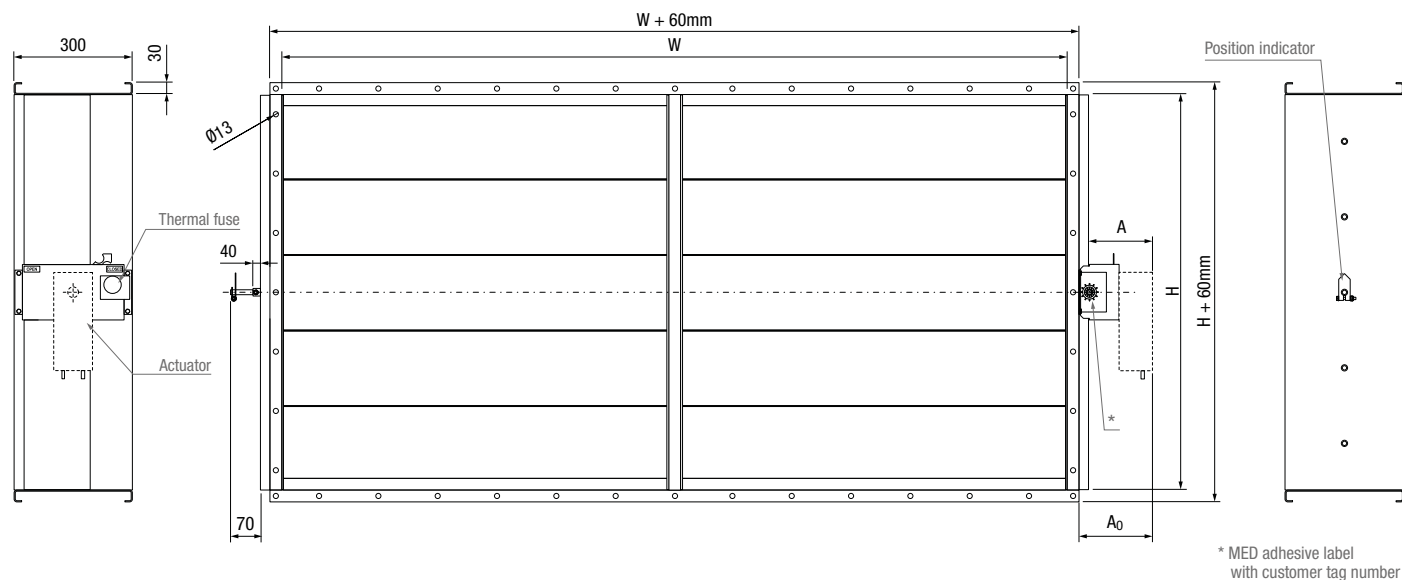
Technical data**SOLAS A60 frame 300mm - H ≤1000mm****SAFE AREA - ATEX AREA** **Features**

Dimensional range	from 350x150mm to 2000x1000mm step 50mm
Flange	Standard 30mm On request 50mm
Operating temperature range	-40°C / +50°C
Operating air velocity (damper in working condition)	15m/s max
Peak limits (sporadic and for a few seconds)	P = 3000Pa, v = 20m/s
Leakage Class acc. to EN 1751	Standard 2B On request 3C

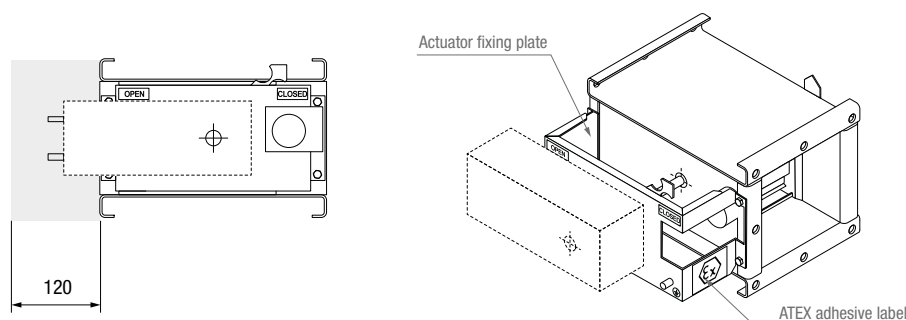
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Description	Material	
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Blades	galv. steel Z200 double skin 1.2mm+1.2mm fiber glass gasket*	AISI316L double skin 1.2mm+1.2mm fiber glass gasket*
Shafts	AISI316 - Ø20mm	AISI316 - Ø20mm
Bushes	bronze self lub. - Ø20mm	bronze self lub. - Ø20mm
Actuator for	SAFE AREA Belimo BF - Schischek InMax ATEX AREA Schischek ExMax - RedMax	Belimo BF - Schischek InMax Schischek ExMax - RedMax

Actuator for AREA	A [mm]	A ₀ [mm]
SAFE	140	165
ATEX	160	185

* Non-classified SVF, 20x5mm

ACTUATOR MOUNTED VERTICALLY FOR H>250mm**ACTUATOR MOUNTED HORIZONTALLY FOR H ≤250mm**

Drilling scheme, see pag. 10



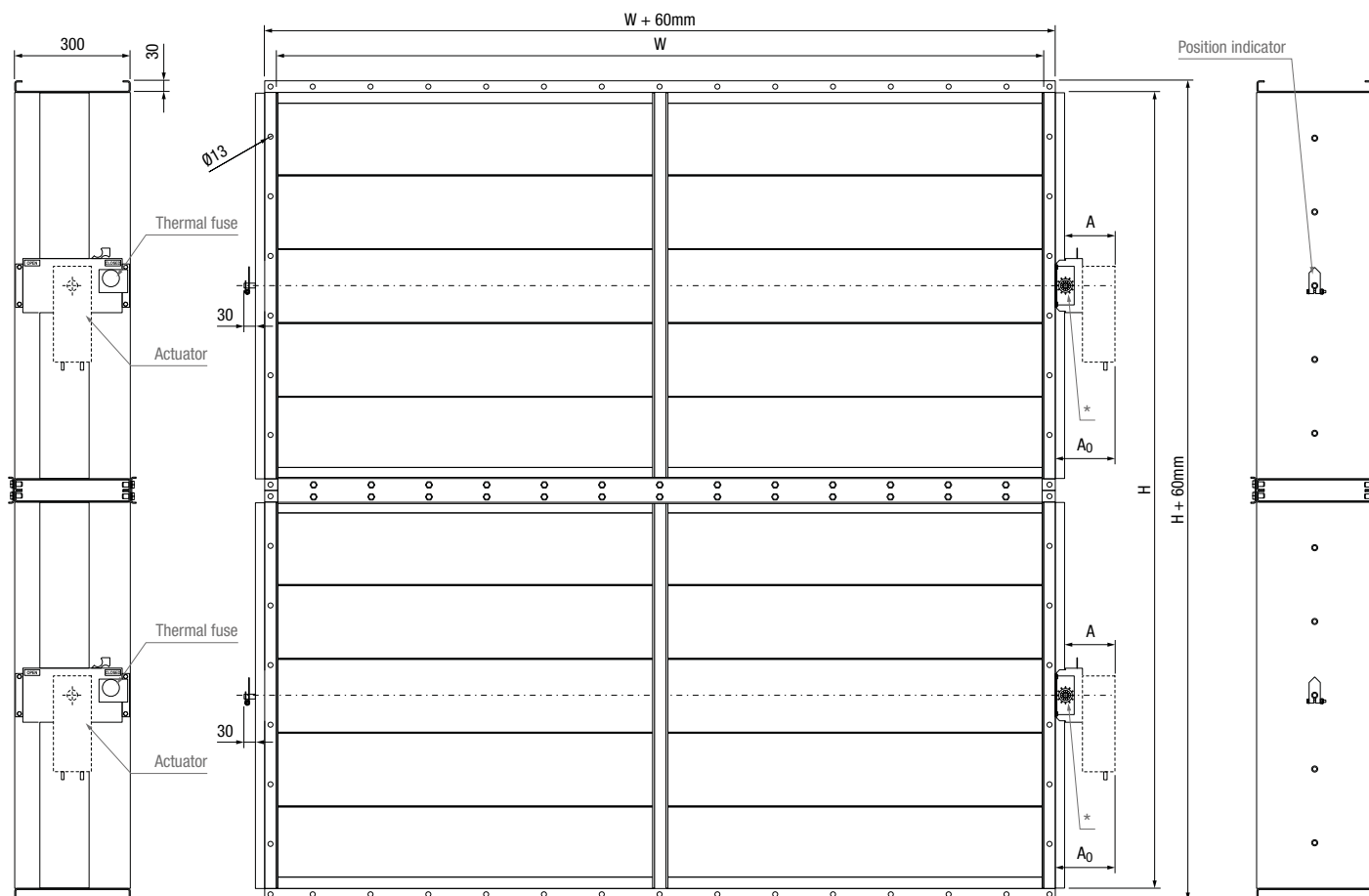
Technical data**SOLAS A0 frame 300mm - H >1000mm****SAFE AREA - ATEX AREA** **Features**

Dimensional range	from 350x1050mm to 2000x2000mm step 50mm
Flange	Standard 30mm On request 50mm
Operating temperature range	-40°C / +50°C
Operating air velocity (damper in working condition)	15m/s max
Peak limits (sporadic and for a few seconds)	P=3000Pa, v=20m/s
Leakage Class acc. to EN 1751	Standard 2B On request 3C

	Version 5 (300GW)	Version 6 (3006W)
Description	Material	
Casing (welded)	hot dip galv. steel - tk. 3mm	AISI316L - tk. 3mm
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Shafts	AISI316 - Ø20mm	AISI316 - Ø20mm
Bushes	bronze self lub. - Ø20mm	bronze self lub. - Ø20mm
Actuator for	SAFE AREA	Belimo BF - Schischek InMax
	ATEX AREA	Schischek ExMax - RedMax

Actuator for AREA	A [mm]	A ₀ [mm]
SAFE	110	135
ATEX	130	155

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ACTUATOR MOUNTED VERTICALLY FOR H>250mm

Drilling scheme, see pag. 10

* MED adhesive label
with customer tag number

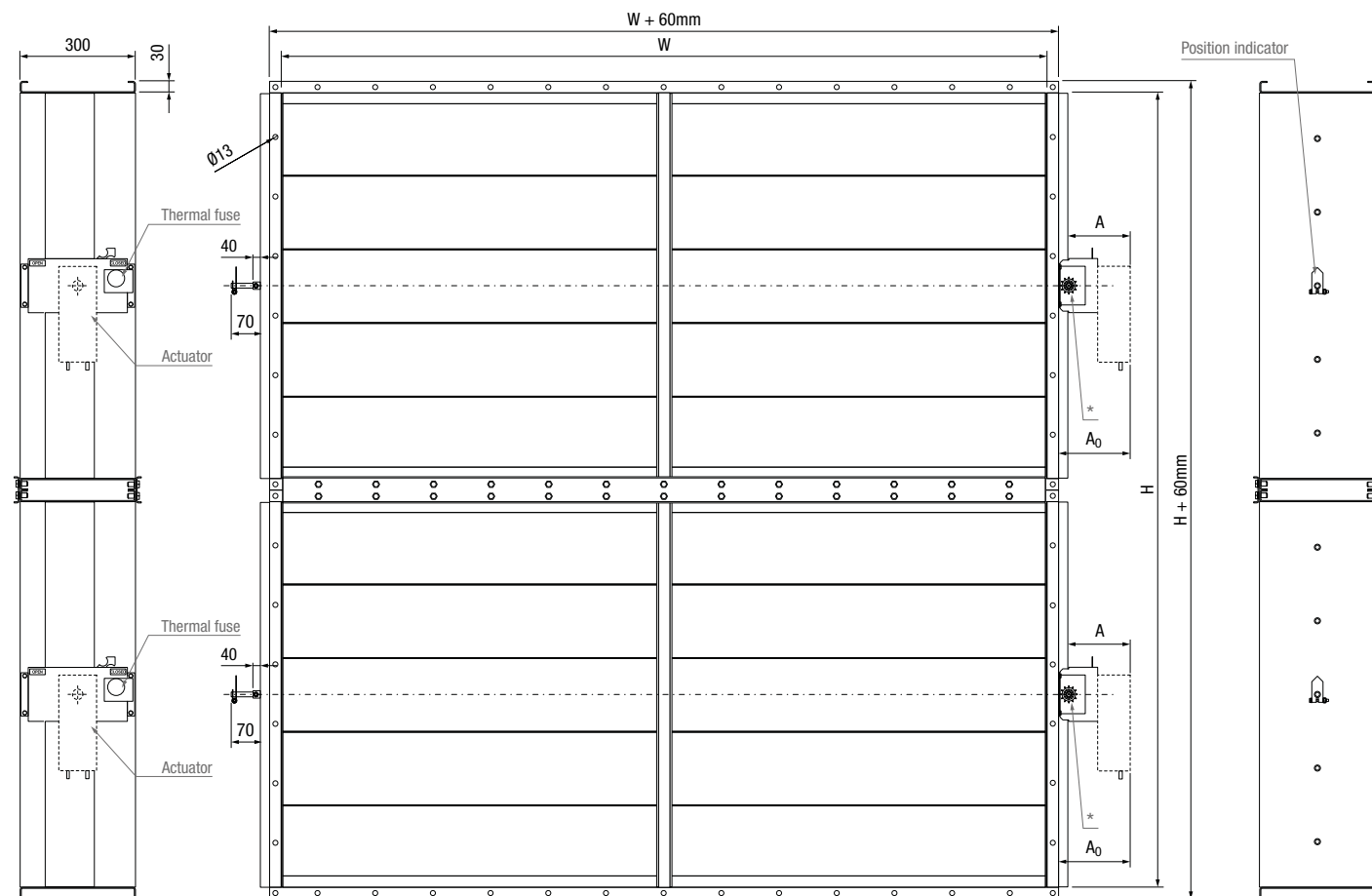
Technical data**SOLAS A60 frame 300mm - H >1000mm****SAFE AREA - ATEX AREA** **Features**

Dimensional range	from 350x1050mm to 2000x2000mm step 50mm
Flange	Standard 30mm On request 50mm
Operating temperature range	-40°C / +50°C
Operating air velocity (damper in working condition)	15m/s max
Peak limits (sporadic and for a few seconds)	P=3000Pa, v=20m/s
Leakage Class acc. to EN 1751	Standard 2B On request 3C

	Version 5 (300GW)	Version 6 (3006W)
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Actuator for	SAFE AREA	Belimo BF - Schischek InMax
	ATEX AREA	Schischek ExMax - RedMax

Actuator for AREA	A [mm]	A ₀ [mm]
SAFE	140	165
ATEX	160	185

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ACTUATOR MOUNTED VERTICALLY FOR H>250mm

Drilling scheme, see pag. 10

* MED adhesive label
with customer tag number

Dimensions and Weights

H ≤1000mm

H [mm]	W [mm]													
	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
150	18,3	19,5	20,7	21,9	23,1	24,3	25,5	26,7	27,9	29,1	30,3	31,5	32,7	33,9
200	20,8	22,0	23,3	24,5	25,8	27,0	28,3	29,5	30,8	32,0	33,3	34,5	35,8	37,0
250	22,9	24,1	25,4	26,6	27,9	29,1	30,4	31,6	32,9	34,1	35,4	36,6	37,9	39,1
300	27,0	28,4	29,8	31,2	32,5	33,9	35,3	36,7	38,0	39,4	40,8	42,2	43,5	44,9
350	29,5	30,9	32,3	33,7	35,1	36,6	38,0	39,4	40,8	42,2	43,7	45,1	46,5	47,9
400	31,9	33,4	34,8	36,3	37,8	39,2	40,7	42,1	43,6	45,1	46,5	48,0	49,5	50,9
450	35,7	37,3	38,8	40,4	41,9	43,5	45,0	46,5	48,1	49,6	51,2	52,7	54,3	55,8
500	38,2	39,8	41,3	42,9	44,5	46,1	47,7	49,3	50,9	52,5	54,1	55,6	57,2	58,8
550	40,6	42,2	43,9	45,5	47,1	48,8	50,4	52,0	53,7	55,3	56,9	58,6	60,2	61,8
600	43,0	44,7	46,4	48,1	49,7	51,4	53,1	54,8	56,5	58,1	59,8	61,5	63,2	64,9
650	46,9	48,6	50,4	52,2	53,9	55,7	57,4	59,2	60,9	62,7	64,5	66,2	68,0	69,7
700	49,3	51,1	52,9	54,7	56,5	58,3	60,1	61,9	63,7	65,5	67,3	69,1	70,9	72,7
750	51,7	53,6	55,4	57,3	59,1	61,0	62,8	64,7	66,5	68,4	70,2	72,1	73,9	75,8
800	54,2	56,1	58,0	59,8	61,7	63,6	65,5	67,4	69,3	71,2	73,1	75,0	76,9	78,8
850	58,0	60,0	62,0	63,9	65,9	67,9	69,9	71,8	73,8	75,8	77,7	79,7	81,7	83,7
900	60,4	62,5	64,5	66,5	68,5	70,5	72,6	74,6	76,6	78,6	80,6	82,6	84,7	86,7
950	62,9	64,9	67,0	69,1	71,1	73,2	75,3	77,3	79,4	81,4	83,5	85,6	87,6	89,7
1000	65,3	67,4	69,5	71,6	73,7	75,8	78,0	80,1	82,2	84,3	86,4	88,5	90,6	92,7
Weight* [kg]														

Actuator weights:

- BELIMO BF...
18Nm = 3,1kg
- SCHISCHEK ExMax
15Nm = 3,5kg

H [mm]	W [mm]																	
	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1900	2000
150	35,1	36,3	37,5	38,7	39,9	41,1	42,3	43,5	44,7	45,9	47,1	48,3	49,5	50,7	51,9	53,1	55,5	57,9
200	38,3	39,5	40,8	42,0	43,3	44,5	45,8	47,0	48,3	49,5	50,8	52,0	53,3	54,5	55,8	57,0	59,5	62,0
250	40,4	41,6	42,9	44,1	45,4	46,6	47,9	49,1	50,4	51,6	52,9	54,1	55,4	56,6	57,9	59,1	61,6	64,2
300	46,3	47,6	49,0	50,4	51,8	53,1	54,5	55,9	57,3	58,6	60,0	61,4	62,8	64,1	65,5	66,9	69,6	72,4
350	49,3	50,8	52,2	53,6	55,0	56,4	57,9	59,3	60,7	62,1	63,5	65,0	66,4	67,8	69,2	70,6	73,5	76,3
400	52,4	53,9	55,3	56,8	58,3	59,7	61,2	62,7	64,1	65,6	67,1	68,5	70,0	71,4	72,9	74,4	77,3	80,2
450	57,3	58,9	60,4	62,0	63,5	65,1	66,6	68,2	69,7	71,2	72,8	74,3	75,9	77,4	79,0	80,5	83,6	86,7
500	60,4	62,0	63,6	65,2	66,8	68,4	69,9	71,5	73,1	74,7	76,3	77,9	79,5	81,1	82,7	84,2	87,4	90,6
550	63,5	65,1	66,7	68,4	70,0	71,6	73,3	74,9	76,5	78,2	79,8	81,5	83,1	84,7	86,4	88,0	91,3	94,5
600	66,5	68,2	69,9	71,6	73,3	74,9	76,6	78,3	80,0	81,7	83,3	85,0	86,7	88,4	90,1	91,7	95,1	98,4
650	71,5	73,2	75,0	76,8	78,5	80,3	82,0	83,8	85,5	87,3	89,1	90,8	92,6	94,3	96,1	97,8	101,4	104,9
700	74,6	76,4	78,2	80,0	81,8	83,6	85,4	87,2	89,0	90,8	92,6	94,4	96,2	98,0	99,8	101,6	105,2	108,8
750	77,6	79,5	81,3	83,2	85,0	86,9	88,7	90,6	92,4	94,2	96,1	97,9	99,8	101,6	103,5	105,3	109,0	112,7
800	80,7	82,6	84,5	86,4	88,3	90,1	92,0	93,9	95,8	97,7	99,6	101,5	103,4	105,3	107,2	109,1	112,9	116,7
850	85,6	87,6	89,6	91,5	93,5	95,5	97,5	99,4	101,4	103,4	105,3	107,3	109,3	111,3	113,2	115,2	119,1	123,1
900	88,7	90,7	92,7	94,7	96,8	98,8	100,8	102,8	104,8	106,8	108,9	110,9	112,9	114,9	116,9	118,9	123,0	127,0
950	91,8	93,8	95,9	97,9	100,0	102,1	104,1	106,2	108,3	110,3	112,4	114,4	116,5	118,6	120,6	122,7	126,8	130,9
1000	94,8	96,9	99,0	101,1	103,2	105,4	107,5	109,6	111,7	113,8	115,9	118,0	120,1	122,2	124,3	126,4	130,6	134,9
Weight* [kg]																		

* Weights refer to dampers only without commands or motor (tolerance ± 10%)

Dimensions and Weights

H > 1000mm

H [mm]	W [mm]													
	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
1050	76,3	39,0	41,4	43,8	46,2	48,6	51,0	53,4	55,8	58,2	60,6	63,0	65,4	67,8
1100	81,2	84,5	87,7	91,0	94,3	97,5	100,8	104,1	107,3	110,6	113,9	117,1	120,4	123,7
1150	83,6	86,9	90,3	93,6	96,9	100,2	103,5	106,8	110,1	113,4	116,8	120,1	123,4	126,7
1200	86,1	89,4	92,8	96,1	99,5	102,9	106,2	109,6	112,9	116,3	119,6	123,0	126,4	129,7
1250	89,9	93,3	96,8	100,2	103,7	107,1	110,5	114,0	117,4	120,8	124,3	127,7	131,2	134,6
1300	93,8	97,3	100,8	104,3	107,8	111,3	114,9	118,4	121,9	125,4	128,9	132,4	135,9	139,5
1350	96,2	99,8	103,3	106,9	110,4	114,0	117,6	121,1	124,7	128,2	131,8	135,4	138,9	142,5
1400	98,6	102,2	105,8	109,4	113,0	116,6	120,3	123,9	127,5	131,1	134,7	138,3	141,9	145,5
1450	101,0	104,7	108,4	112,0	115,7	119,3	123,0	126,6	130,3	133,9	137,6	141,2	144,9	148,5
1500	103,5	107,2	110,9	114,6	118,3	122,0	125,7	129,4	133,0	136,7	140,4	144,1	147,8	151,5
1550	105,9	109,6	113,4	117,1	120,9	124,6	128,4	132,1	135,8	139,6	143,3	147,1	150,8	154,6
1600	108,3	112,1	115,9	119,7	123,5	127,3	131,1	134,8	138,6	142,4	146,2	150,0	153,8	157,6
1650	112,2	116,1	119,9	123,8	127,6	131,5	135,4	139,2	143,1	147,0	150,8	154,7	158,6	162,4
1700	116,0	120,0	123,9	127,9	131,8	135,8	139,7	143,6	147,6	151,5	155,5	159,4	163,4	167,3
1750	118,5	122,5	126,4	130,4	134,4	138,4	142,4	146,4	150,4	154,4	158,4	162,3	166,3	170,3
1800	120,9	124,9	129,0	133,0	137,0	141,1	145,1	149,1	153,2	157,2	161,2	165,3	169,3	173,3
1850	123,3	127,4	131,5	135,6	139,6	143,7	147,8	151,9	156,0	160,0	164,1	168,2	172,3	176,4
1900	125,8	129,9	134,0	138,1	142,3	146,4	150,5	154,6	158,8	162,9	167,0	171,1	175,3	179,4
1950	128,2	132,4	136,5	140,7	144,9	149,0	153,2	157,4	161,5	165,7	169,9	174,1	178,2	182,4
2000	130,6	134,8	139,0	143,3	147,5	151,7	155,9	160,1	164,3	168,6	172,8	177,0	181,2	185,4
Weight* [kg]														

Actuator weights:

- BELIMO BF...
18Nm = 3,1kg
- SCHISCHEK ExMax
15Nm = 3,5kg

*For dampers combo
having H > 1000 mm,
2 actuators are required.*

H [mm]	W [mm]																	
	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1900	2000
1050	70,2	72,6	75,0	77,4	79,8	82,2	84,6	87,0	89,4	91,8	94,2	96,6	99,0	101,4	103,8	106,2	111,0	115,8
1100	127,0	130,2	133,5	136,8	140,0	143,3	146,6	149,8	153,1	156,4	159,6	162,9	166,2	169,4	172,7	176,0	182,5	189,0
1150	130,0	133,3	136,6	140,0	143,3	146,6	149,9	153,2	156,5	159,8	163,2	166,5	169,8	173,1	176,4	179,7	186,3	193,0
1200	133,1	136,4	139,8	143,2	146,5	149,9	153,2	156,6	160,0	163,3	166,7	170,0	173,4	176,7	180,1	183,5	190,2	196,9
1250	138,0	141,5	144,9	148,3	151,8	155,2	158,6	162,1	165,5	169,0	172,4	175,8	179,3	182,7	186,1	189,6	196,5	203,3
1300	143,0	146,5	150,0	153,5	157,0	160,5	164,1	167,6	171,1	174,6	178,1	181,6	185,2	188,7	192,2	195,7	202,7	209,8
1350	146,0	149,6	153,2	156,7	160,3	163,8	167,4	171,0	174,5	178,1	181,6	185,2	188,8	192,3	195,9	199,4	206,6	213,7
1400	149,1	152,7	156,3	159,9	163,5	167,1	170,7	174,3	177,9	181,6	185,2	188,8	192,4	196,0	199,6	203,2	210,4	217,6
1450	152,2	155,8	159,5	163,1	166,8	170,4	174,1	177,7	181,4	185,0	188,7	192,3	196,0	199,6	203,3	206,9	214,2	221,5
1500	155,2	158,9	162,6	166,3	170,0	173,7	177,4	181,1	184,8	188,5	192,2	195,9	199,6	203,3	207,0	210,7	218,1	225,5
1550	158,3	162,0	165,8	169,5	173,3	177,0	180,7	184,5	188,2	192,0	195,7	199,5	203,2	206,9	210,7	214,4	221,9	229,4
1600	161,4	165,1	168,9	172,7	176,5	180,3	184,1	187,9	191,7	195,4	199,2	203,0	206,8	210,6	214,4	218,2	225,7	233,3
1650	166,3	170,2	174,0	177,9	181,8	185,6	189,5	193,4	197,2	201,1	205,0	208,8	212,7	216,6	220,4	224,3	232,0	239,7
1700	171,2	175,2	179,1	183,1	187,0	191,0	194,9	198,9	202,8	206,7	210,7	214,6	218,6	222,5	226,5	230,4	238,3	246,2
1750	174,3	178,3	182,3	186,3	190,3	194,3	198,2	202,2	206,2	210,2	214,2	218,2	222,2	226,2	230,2	234,1	242,1	250,1
1800	177,4	181,4	185,4	189,5	193,5	197,5	201,6	205,6	209,7	213,7	217,7	221,8	225,8	229,8	233,9	237,9	246,0	254,0
1850	180,4	184,5	188,6	192,7	196,8	200,8	204,9	209,0	213,1	217,2	221,2	225,3	229,4	233,5	237,6	241,6	249,8	258,0
1900	183,5	187,6	191,8	195,9	200,0	204,1	208,3	212,4	216,5	220,6	224,8	228,9	233,0	237,1	241,3	245,4	253,6	261,9
1950	186,6	190,7	194,9	199,1	203,2	207,4	211,6	215,8	219,9	224,1	228,3	232,4	236,6	240,8	245,0	249,1	257,5	265,8
2000	189,6	193,8	198,1	202,3	206,5	210,7	214,9	219,1	223,4	227,6	231,8	236,0	240,2	244,4	248,7	252,9	261,3	269,7
Weight* [kg]																		

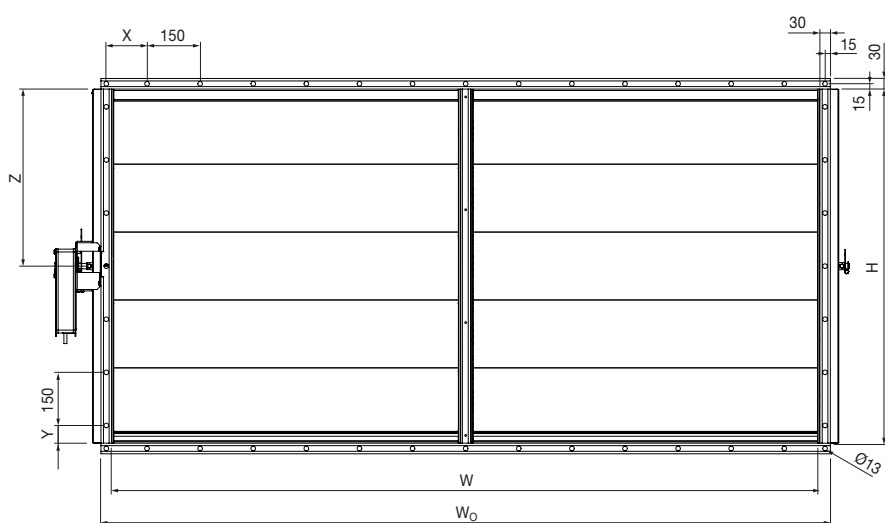
* Weights refer to dampers only without commands or motor (tolerance ± 10%)

Drilling scheme

Flange 30mm

W [mm]	W _O [mm]	X [mm]	H [mm]	n° Blades	CONTROL SHAFT POSITION (n° blades from top)	Z [mm]	Y [mm]
1050	1110	90	150	1	1	75,0	75
1100	1160	115	200	1	1	100,0	100
1150	1210	140	250	1	1	125,0	125
1200	1260	165	300	2	1	79,5	150
1250	1310	40	350	2	1	104,5	175
1300	1360	65	400	2	1	104,5	50
1350	1410	90	450	3	2	225,0	75
1400	1460	115	500	3	2	250,0	100
1450	1510	140	550	3	2	275,0	125
1500	1560	165	600	3	2	300,0	150
1550	1610	40	650	3	2	254,5	175
1600	1660	65	700	4	2	254,5	50
1650	1710	90	750	4	3	445,5	75
1700	1760	115	800	4	3	495,5	100
1750	1810	140	850	5	3	425,0	125
1800	1860	165	900	5	3	450,0	150
1850	1910	40	950	5	3	475,0	175
1900	1960	65	1000	5	3	500,0	50
1950	2010	90					
2000	2060	115					

Upon request, drilling scheme with 50mm flange is available.



Installation

Bulkhead and Deck

All installations shall be carried out in accordance with SOLAS II-2/9.7.3

MINIMUM TOTAL LENGTH

The installation procedures are based on the way the test samples have been tested, classified, type-approved and certified as SOLAS A0 without insulation or A60 with proper insulation. All tests have been performed in accordance to the International Code for Application of Fire Test Procedures (2010 FTP Code), in force at the time of the certification.

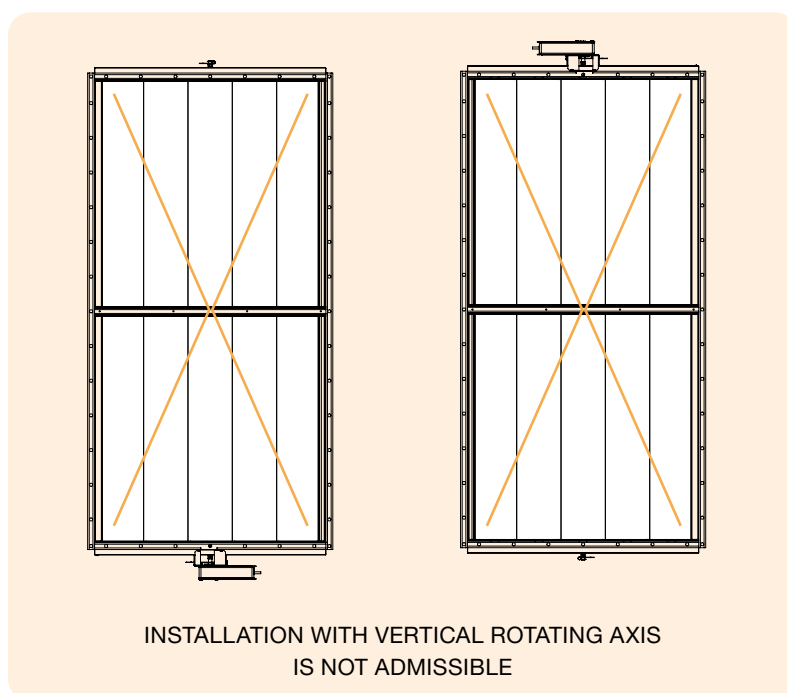
Bulkheads and Decks have to be class "A" according to 2010 FTP Code Annex 1, part 3, Appendix 1. In particular, dimensions, thickness, stiffness, spacing, dampers spacing, have to be compliant and suitable to class A bulkheads and decks.

Coamings, the thick wall of air ducts which extend from the bulkhead or from the deck, shall be in accordance with SOLAS requirements.

Frame L	Coaming Lc	Coaming insulation Li	
		A60	
		H≤1000mm	H>1000mm
300	575	900	1200

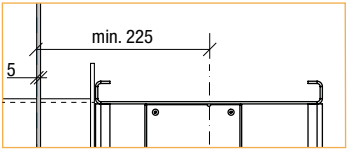
All indicated measures are in millimetres

- The damper shall be bolted to the coaming by means of bolts and nuts. For ease of installation, socket screws M10x25 are suggested
- Bolt tightening torque = 40Nm (acc. to suggested screws)
- Insert a bio-soluble fiber paper gaskets 20x5mm between damper and coaming flanges
- The damper shall be installed on a certified A0-A60 Bulkhead or Deck
- The coaming thickness shall be at least 5mm, acc. to SOLAS requirements (2010 FTP Code Annex 1, Part 3, Appendix 2)
- Only for A60 the insulation shall be 60mm thick at least and the insulating material shall have a density of 100kg/m³ and shall be a rockwool insulating material. We recommend the use of Rockwool SEAROX SL620.



Picture only for illustration purposes

Installation
Bulkhead and Deck



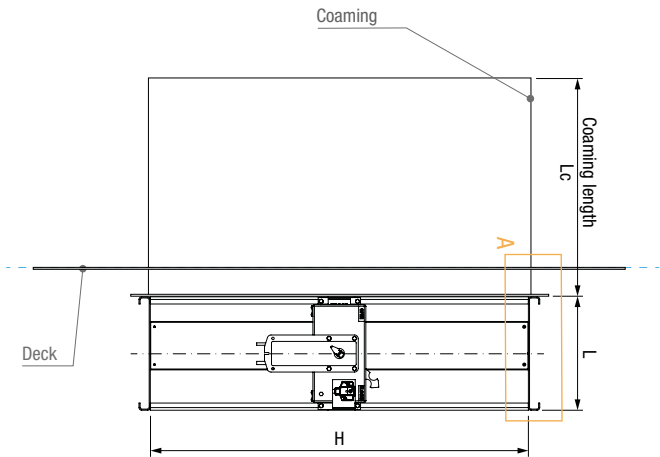
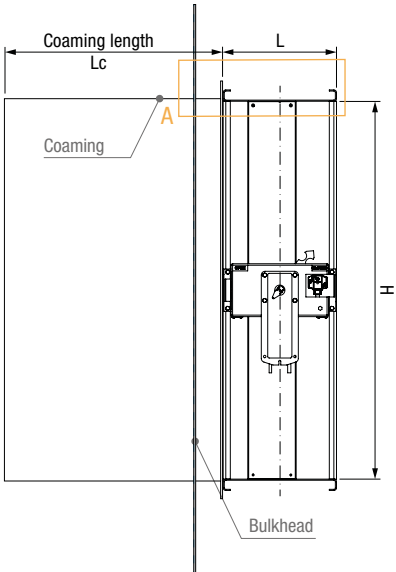
Detail A

BULKHEAD

DECK

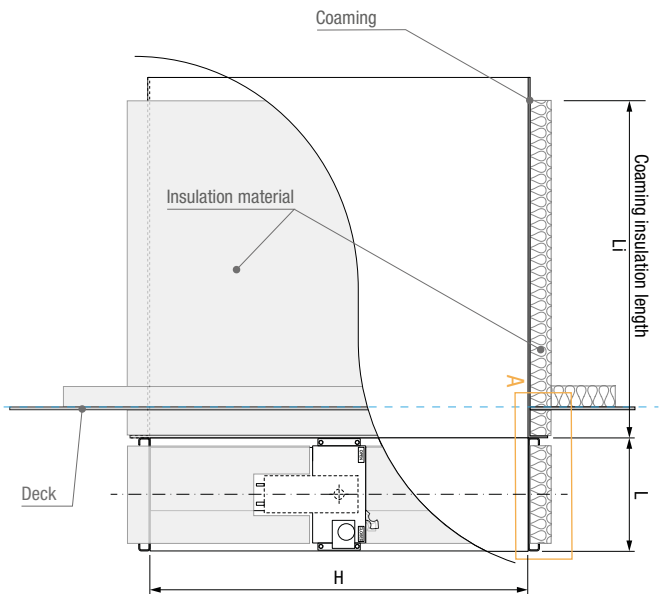
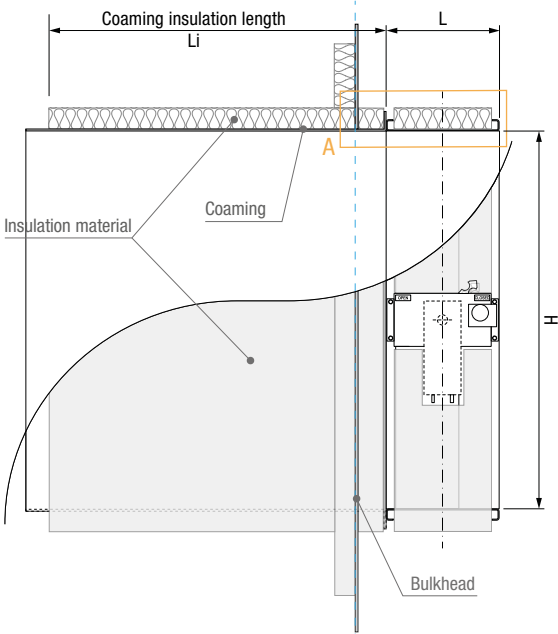
A0

A0



A60

A60



Maintenance

Prior to any intervention on the product use the necessary and required Personal Protection Equipment (PPE) and then switch off the power supply to the command systems (actuator).

- Use NON-acid and NON-abrasive liquids or substances for cleaning (for example Arexons Fulcron).
- Do not paint levers or shaft.
- Bushes are self lubricating. Do not use lubricant.
- If needed, for levers use spray lubricant and not paste lubricants or grease.
- Periodically, every 6 months, check the damper movement by making the actuator execute one full open-close cycle; remove solid residue in the bushes-shafts gaps.

Electrical actuator
BELIMO

Description	On-off, spring-return	
Torque	 18Nm	
	 12Nm	
Power	24VAC/DC (at rest 2W)	BF24TN
	230VAC (at rest 3W)	BF230TN
Angle of rotation	95°	
Running time	 < 120s	
	 16s	
Dimensions (LxWxH)	248x98x58,6mm	
Shaft	square 12x12mm 	

BAT



Safety temperature trigger
Thermal fuse
(Available for 72-95-120-140°C)

Model **BF...TN**



Zone **SAFE AREA**

ELECTRICAL INSTALLATION

Servo motor 90°
AC/DC 24V - AC 230V
18Nm / 12Nm
with BAT

AC/DC 24V, open-close

Cable colours:
1 = black
2 = white
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = gray
Tf = thermal fuse

AC 230V, open-close

Cable colours:
1 = blue
2 = brown
S1 = violet
S2 = red
S3 = white
S4 = orange
S5 = pink
S6 = gray
Tf = thermal fuse

Electrical actuator SCHISCHEK

Description	On-off 3-pos., spring-return, 2 micro switches, IP66
Torque	15Nm
Power	24...240VAC/DC (at rest 5W)
Angle of rotation	95°
Running time	 3s / 15s / 30s / 60s / 120s  3s / 10s
Dimensions (LxWxH)	210 x 95 x 80mm
Shaft	square 12x12mm 

..Pro-TT



Safety temperature trigger
Thermal fuse
(Available for 72-95°C)

Model	InMax 15-BF	RedMax 15-BF	ExMax 15-BF
		 	 
Zone	SAFE AREA	ATEX AREA ZONE 2, 22 GAS + DUST	ATEX AREA ZONE 1, 2, 21, 22 GAS + DUST

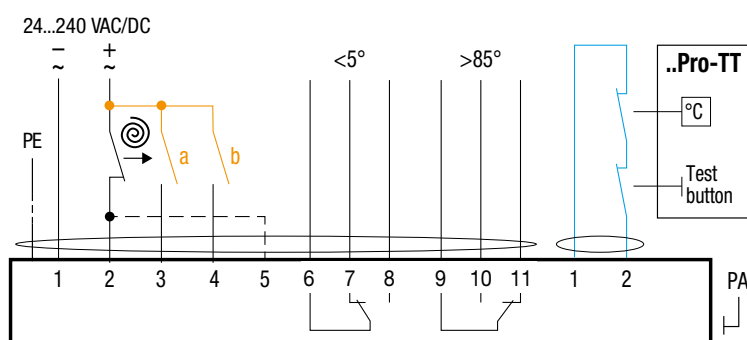
ELECTRICAL INSTALLATION

For 3-pos variation: add orange connection (a and b on 3 and 4)

For standard wiring: Spring return in 10s

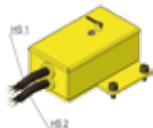
For additional wiring on terminal 5: Spring return in 3s

On-off / 3 pos. - spring return + tripping circuit



Accessoires and spare parts

SWITCHES



Code	Description	
InSwitch	Pair of external auxiliary microswitches	for InMax 15-BF
RedSwitch	Pair of external auxiliary microswitches	for RedMax 15-BF
ExSwitch	Pair of external auxiliary microswitches	for ExMax 15-BF



SN2-C7	2 adjustable external auxiliary contacts	for BF..TN
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THERMAL FUSE



Code	Description	
InPro-TT 72°C	Complete thermal fuse 72°C	for InMax 15-BF
ExPro-TT 72°C	Complete thermal fuse 72°C	for RedMax 15-BF and ExMax 15-BF
NormSafe-S4 95°C	Complete thermal fuse 95°C	for InMax 15-BF
FireSafe-S4 95°C	Complete thermal fuse 95°C	for RedMax 15-BF and ExMax 15-BF



ZBAT72	Fuse at 72°C for BAT device (colour black)	for BF..TN
ZBAT95	Fuse at 95°C for BAT device (colour grey)	for BF..TN
ZBAT120	Fuse at 120°C for BAT device (colour orange)	for BF..TN
ZBAT140	Fuse at 140°C for BAT device (colour red)	for BF..TN

For the replacement of the old model ZBAE, contact our sales department

JUNCTION BOXES



Code	Description	
InBox-BF	11 terminals, 3 cable glands	for InMax 15-BF
InBox-BF/SW	5+6 terminals + 6 terminals, 4 glands + 1 duplex gland	for InMax 15-BF with InSwitch
RedBox-BF	11 terminals, 3 cable glands	for RedMax 15-BF
RedBox-BF/SW	5+6 terminals + 6 terminals, 4 glands + 1 duplex gland	for RedMax 15-BF with RedSwitch
ExBox-BF	11 terminals, 3 cable glands	for ExMax 15-BF
ExBox-BF/SW	5+6 terminals + 6 terminals, 4 glands + 1 duplex gland	for ExMax 15-BF with ExSwitch

Accessories and spare parts

Square-to-round connection

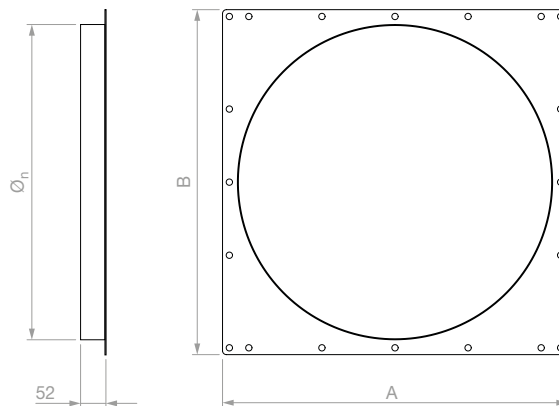
MATERIAL

Available in galvanized steel (Z275) or stainless steel AISI316L.

Damper flange [mm]	A [mm]	B [mm]
30	W+58	H+58
50	W+98	H+98

Round spigot⁽²⁾ intermittent seam welded to the square plate⁽¹⁾ and air tightly sealed after welding.

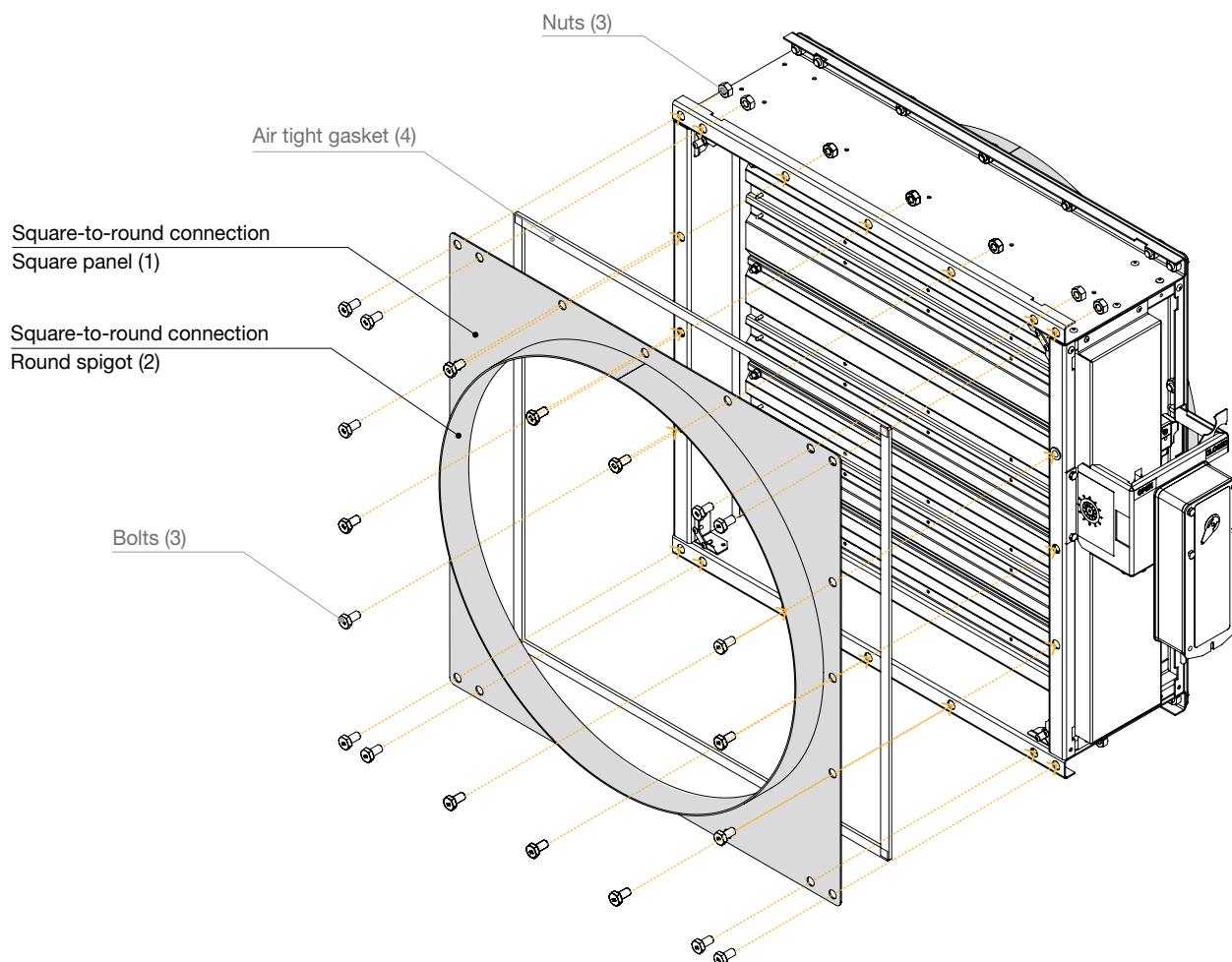
- Z275 version: weldings cleaned and brushed, coated with primer paint and then sealed;
- AISI316L version: weldings cleaned, pickled and then sealed.



The square-to-round connection can be installed on both sides of the damper.

Supplied loose:

- Bolts⁽³⁾ and nuts⁽³⁾ for fixing on damper (maximum tightening torque 25Nm);
- Air tight gasket⁽⁴⁾ between damper flange and fitting



Accessories and spare parts

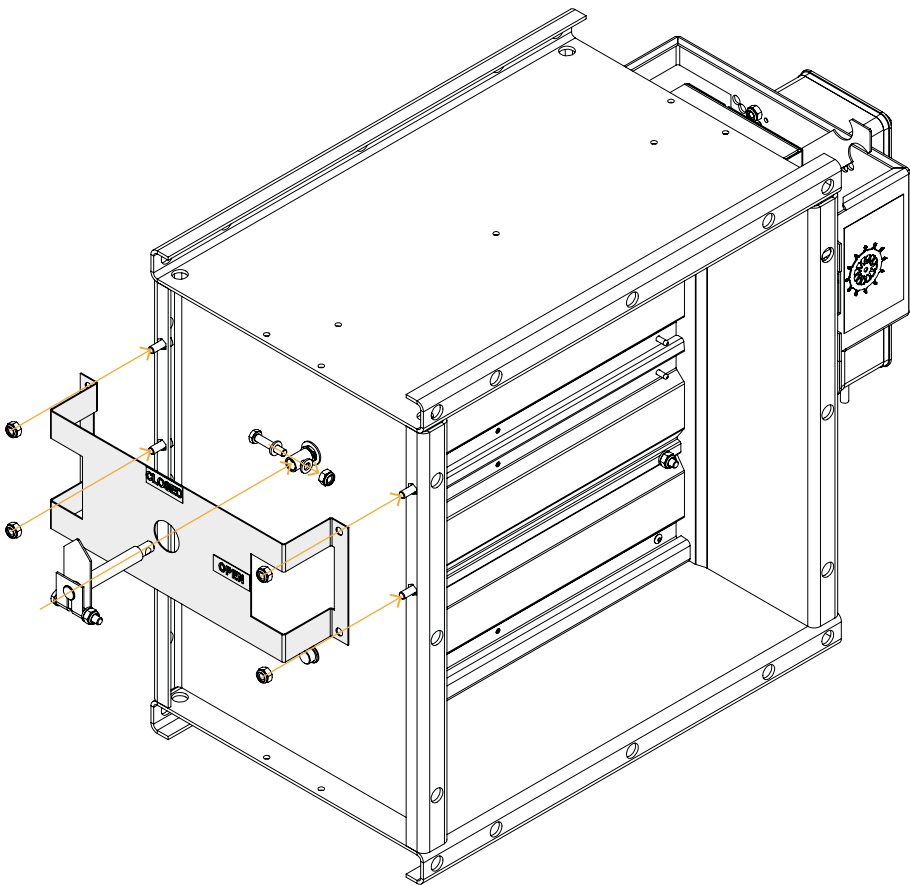
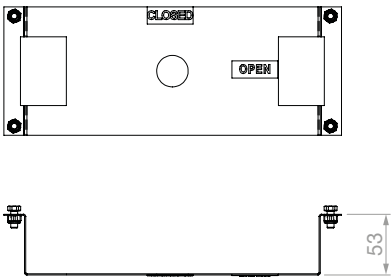
Open-close indicator plate

MATERIAL

Available in stainless steel AISI316 or galvanized steel (Z140)

The open-close indicator kit includes:

- plate with open/close labels
- 4 bolts M6x15



Damper frame [mm]	Material	Order Code	
		Flange 30mm	Flange 50mm
300	Stainless steel AISI316L	NR66PI300300	NR66PI300500
	Galvanized steel (Z140)	NRZ6PI300300	NRZ6PI300500

Only for damper S-MFD SOLAS A60

Accessories and spare parts

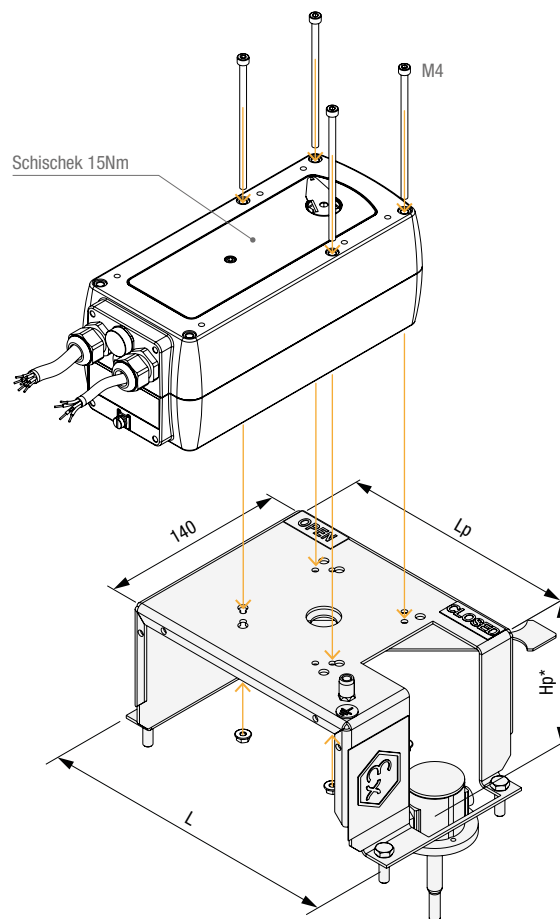
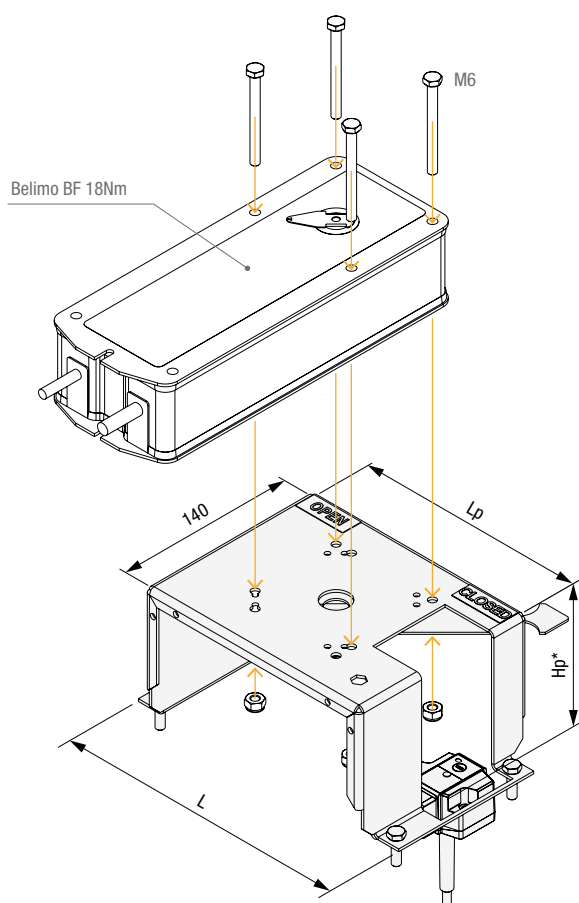
Spare actuator mounting plate

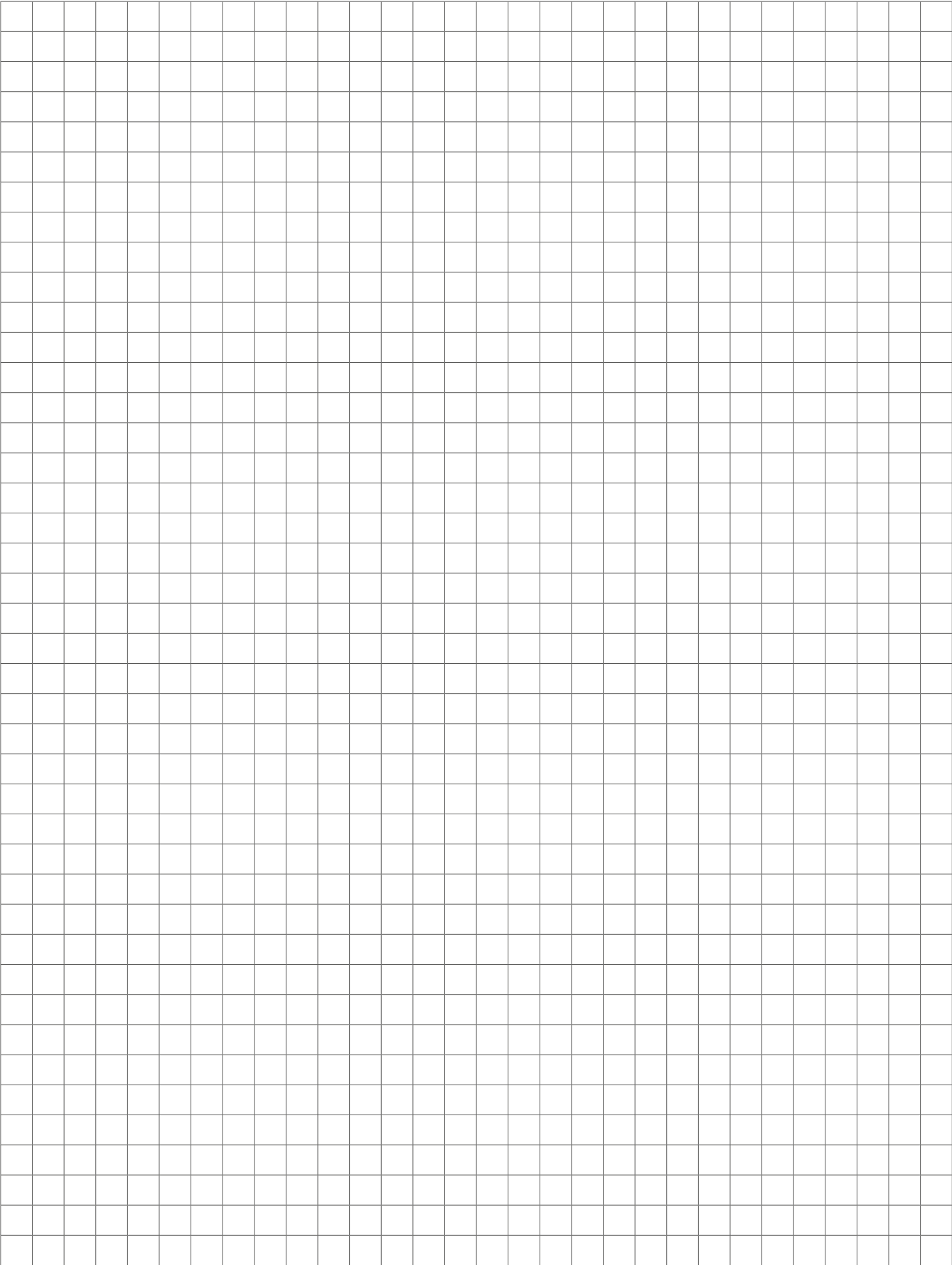
MATERIAL

Available in stainless steel (AISI316L) or galvanized steel (Z275).

Frame L [mm]	A0		A60	
	Dimensions [mm]			
	H _p [*]	L _p	H _p [*]	L _p
300	70	178	100	178

* If the damper flange is 50mm, these quotes are reduced by 20mm





How to order

1	CATEGORY																		
N	MOG Damper																		

2	MODEL																		
M	S-MFD Fire damper																		

3	VERSION																		
5	Frame300 Galv.Steel welded (300GW)																		
6	Frame300 AISI316L welded (3006W)																		

4	SOLAS																		
0	A0																		
6	A60																		

5	TIGHTNESS																		
B	Class 2B																		
C	Class 3C																		

6	AREA																		
0	Suitable for SAFE AREA																		
X	Suitable for ATEX ZONE 1,2,2																		

7	8	9	ACTUATOR																
B	4	1	BF24TRI																
B	4	2	BF230TRI																
B	4	3	BF24TRI/500 + SN2/500 + ZSN-BF + CARTER type 0																
...	...	...	other																
X	0	1	RedMax15BF - ExPro-TT																
X	0	3	ExMax15BF - ExPro-TT																
...	...	...	other																

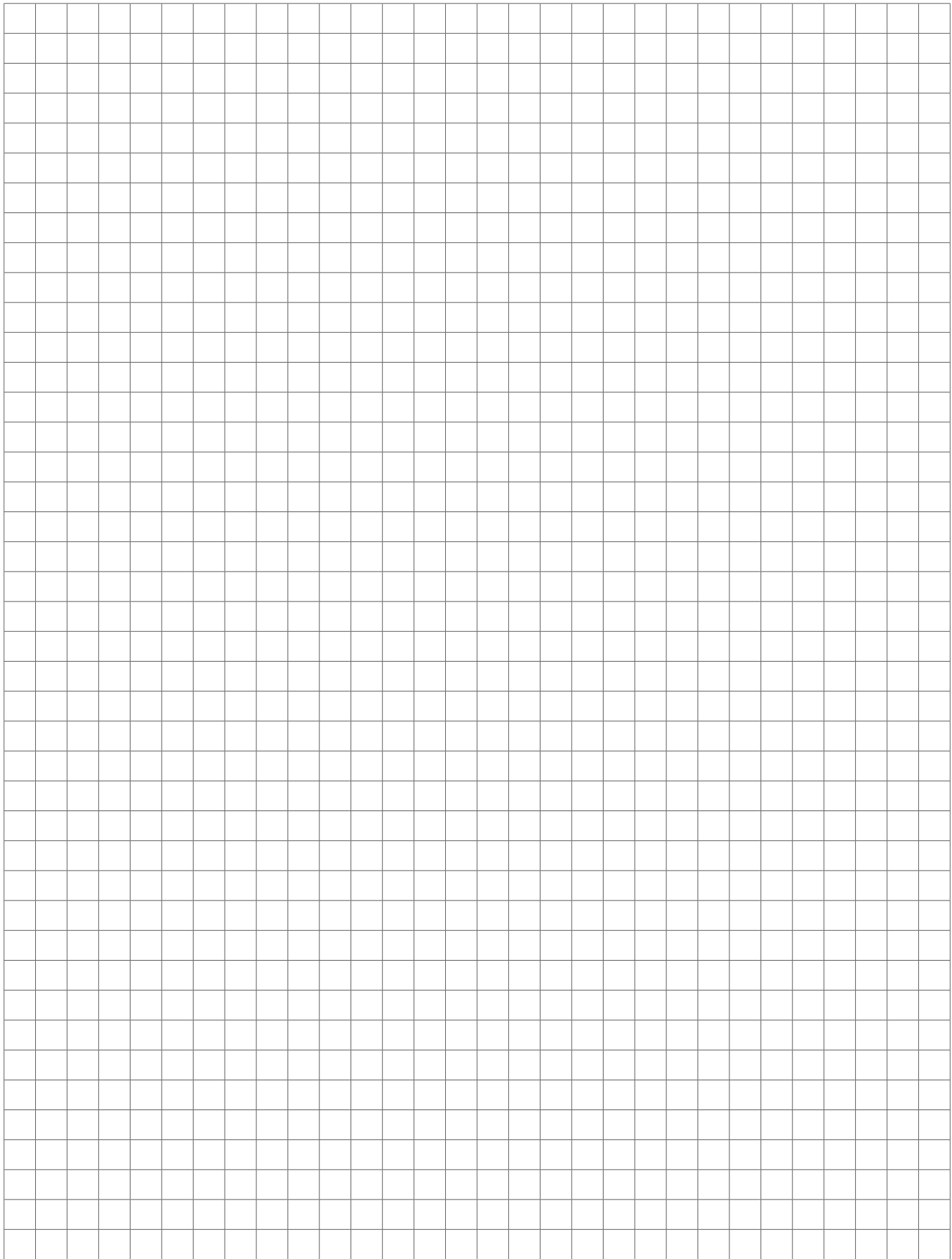
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N	M	5	6	B	0	B	4	2	2	0	0	0	1	0	0	0	3	0	0

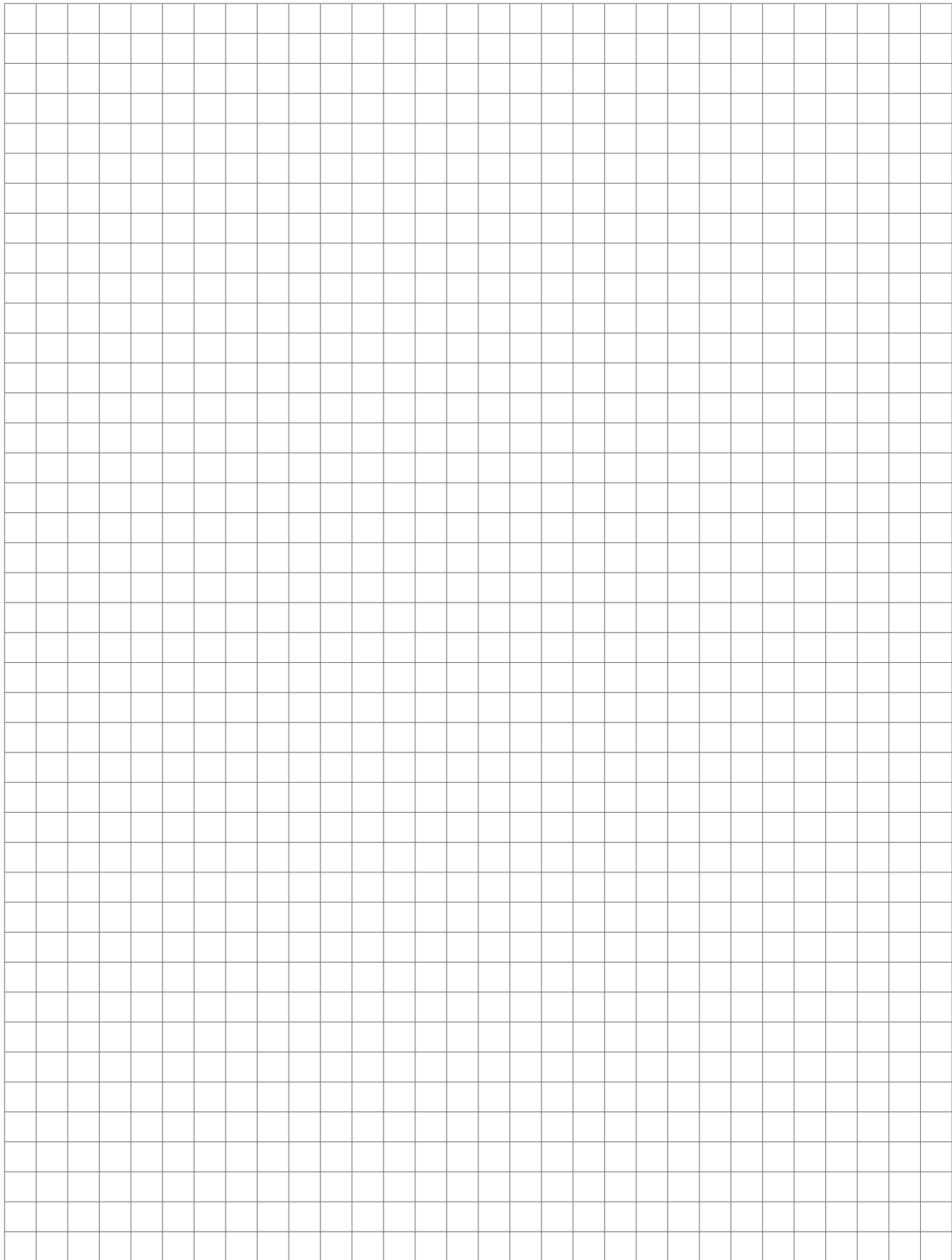
DIMENSION W x H								10	11	12	13	14	15	16	17
1000 x 1000mm								1	0	0	0	1	0	0	0
1600 x 1600mm								1	6	0	0	1	6	0	0
1000 x 150mm								1	0	0	0	0	1	5	0
other								...	...	...	...	...	...	...	...

FLANGES																	18	19	20
Flanges 30 Std Drilling scheme (F3)																	3	0	0
Flanges 50 Std Drilling scheme (F5)																	5	0	0
other																	...	...	...

COMPLETE PRODUCT CODING (dimensions in mm)

Order Code	Description	Actuator and Accessories
	Damper features	
NM56B0B4220001000300	S-MFD A60 2B 2000x1000x300GW F3	BF230TRI





SagiCofim S.p.A. Single Member Company

*subject to the management and coordination
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CERTIFIED MANAGEMENT SYSTEM
ISO 9001 - ISO 14001

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