

LDT-T100 AN

Air leakage damper 100 mm pitch in natural aluminium

CLASSE TENUTA
AIR LEAKAGE CLASSIFICATION

EN 1751:2014

4

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EN 1751:2024

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ATC3



DAMPERS



Description and application:

Rectangular duct damper with double flange, multi-blade type, equipped with an extended shaft suitable for both manual operation and motorized actuation.

Designed to ensure high air tightness by minimizing leakage in HVAC systems, it is ideal for airflow shut-off and isolation, suitable for installation in air distribution networks and in rectangular ducts, whether main, secondary or terminal, in ventilation and air conditioning systems, for both civil and industrial applications.

Construction:

- Execution made of natural extruded aluminium alloy EN AW-6060;
- Frame extruded, screwed, depth 120 mm;
- Frame internally sealed at the corners to ensure air tightness;
- Flange 30mm undrilled;
- Blades extruded with silicone sealing gasket;
- Blade pitch 100 mm with opposed movement operation;
- Side sealing strips in raw stainless steel AISI301;
- Bronze bushings;
- Stub shafts Ø12 mm in galvanized steel;
- Blades movement by external linkage in galvanized steel;
- Control shaft Ø12 extended L=110mm;
- Control plate suitable for manual operation and/or motorized actuator (for models with anti-rotation rod).

Available execution:

- Flanges drilled Ø9, pitch 300mm with BM=15mm;
- Atex version (see page 7).

Operating limits:

- Maximum dimensions WxH: 1700x1510 mm;
- Temperature range: from -20* to +180 °C;
- Dimensional drawing and optional drilling pattern: page 3;
- V max recommended: 15 m/s (see table page 5);
- Pressure: see graph page 5.

* Negative temperature is achievable only if ice formation is prevented.

Certifications and Testing:

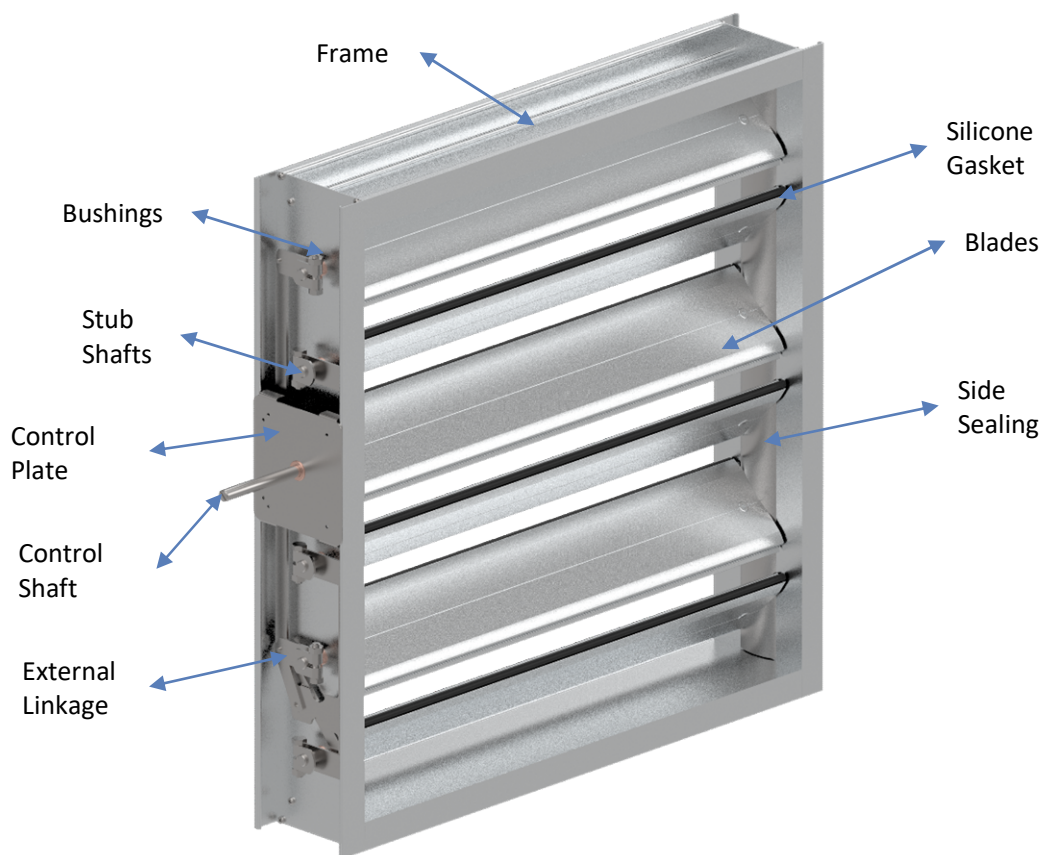
- Pressure drop tests carried out in accordance with ISO 7244;
- Self-generated noise tests carried out in accordance with UNI EN 25135;
- Air leakage tests carried out in accordance with DIN 1946/4;
- Air leakage tests carried out in accordance with EN 1751.



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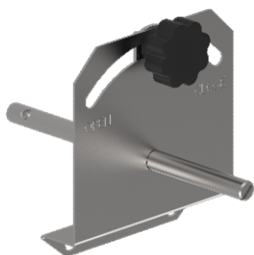
Additional Construction Details



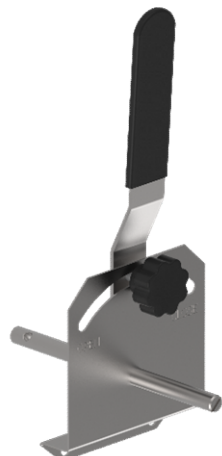
Available Controls, Options, Accessories and Actuators

Manual Control

R11 ZN for $A < 1,2\text{m}^2$



R12 ZN for $A > 1,2\text{m}^2$



Option

Teflon Bushings
($T_{\text{max}} +180^{\circ}\text{C}$)

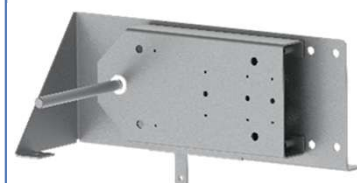


Accessories

Control shaft with extended end
 $\varnothing 18 - R20 \times 4$ (AISI304 shaft)



Internal control plate support
R21 ZN



Actuators

On/Off electric actuators with or without spring return

Modulating On/Off electric actuators with or without spring return

- Belimo
- Siemens
- Schischek



Double-acting pneumatic pistons/cylinders with flow regulators

- Waircom

Integrable accessories:

- 5-way solenoid valve + 24V or 230V coil

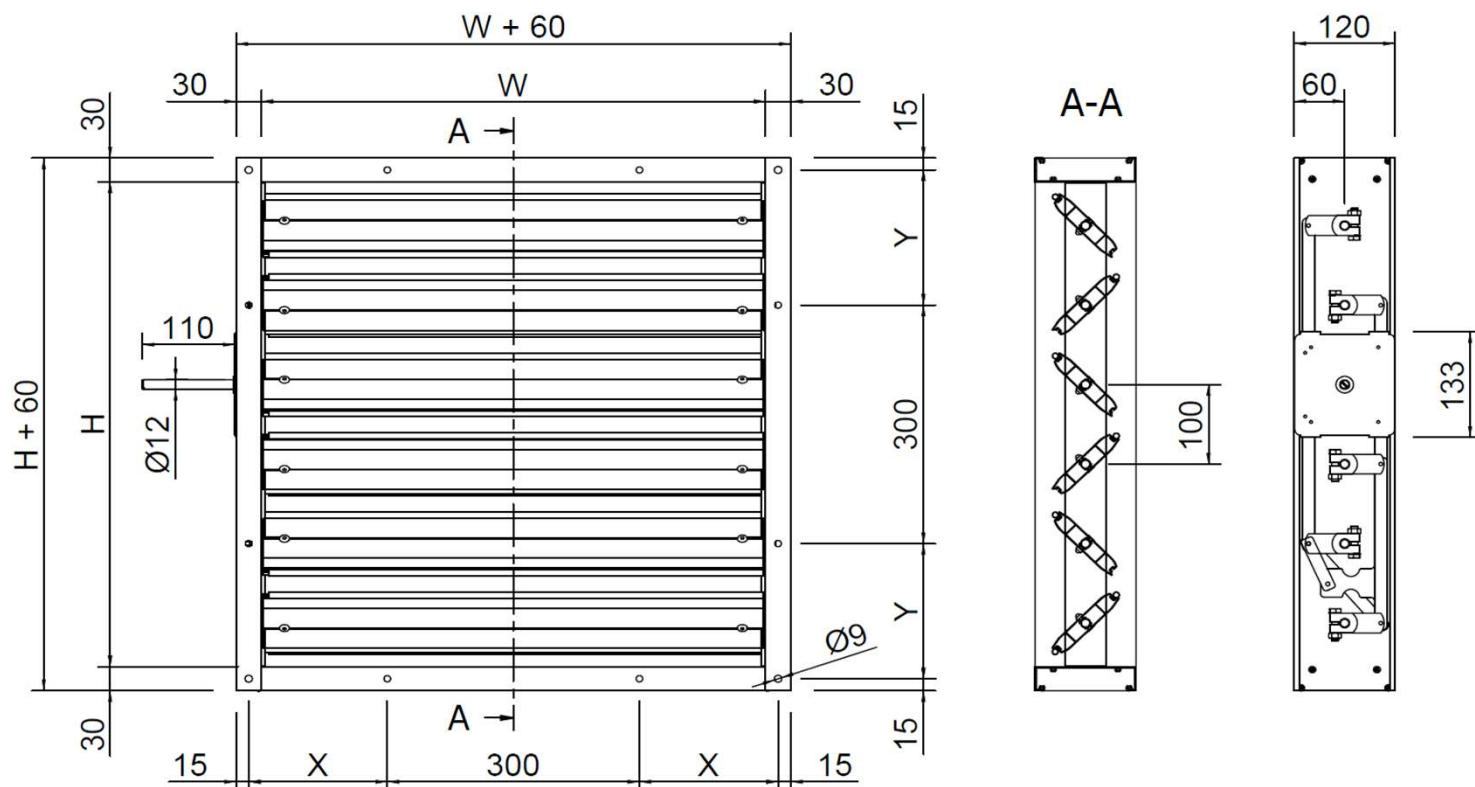




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Dimensional Drawing and Optional Drilling Pattern (size in mm, always referred to the inside of the flanges)



Nr. 4 HOLES CENTERED IN THE CORNERS ALWAYS PRESENT (when optional drilling is requested)

WIDTH DRILLING						HEIGHT DRILLING					
W	N°HOLES	X	W	N°HOLES	X	H	N°HOLES	Y	H	N°HOLES	Y
200	\	\	1100	3	265	210	\	\	1110	3	270
250	\	\	1150	3	290	250	\	\	1150	3	290
300	\	\	1200	3	315	310	\	\	1210	3	320
350	\	\	1250	3	340	350	\	\	1250	3	340
400	1	215	1300	4	215	410	1	220	1310	4	220
450	1	240	1350	4	240	450	1	240	1350	4	240
500	1	265	1400	4	265	510	1	270	1410	4	270
550	1	290	1450	4	290	550	1	290	1450	4	290
600	1	315	1500	4	315	610	1	320	1510	4	320
650	1	340	1550	4	340	650	1	340			
700	2	215	1600	5	215	710	2	220			
750	2	240	1650	5	240	750	2	240			
800	2	265	1700	5	265	810	2	270			
850	2	290				850	2	290			
900	2	315				910	2	320			
950	2	340				950	2	340			
1000	3	215				1010	3	220			
1050	3	240				1050	3	240			

Note : For sizes not listed in the table, the number of holes and the starting position X or Y (Width or Height) are determined by referring to the next lower standard dimension.

N.B. If the resulting value of X or Y is greater than 364.5 mm, the number of holes must refer to the next higher dimension .



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mm W\H	Actuator Torque Selection Table LDT-T100 [Nm]													
	210	310	410	510	610	710	810	910	1010	1110	1210	1310	1410	1510
200	5	5	5	10	10	10	10	10	10	10	10	10	10	10
300	5	5	10	10	10	10	10	10	10	10	10	10	10	10
400	5	10	10	10	10	10	10	10	10	10	10	10	10	10
500	5	10	10	10	10	10	10	10	10	10	10	10	10	10
600	10	10	10	10	10	10	10	10	10	10	10	10	10	10
700	10	10	10	10	10	10	10	10	10	10	10	10	10	10
800	10	10	10	10	10	10	10	10	10	10	10	10	10	10
900	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1000	10	10	10	10	10	10	10	10	10	10	10	10	10	15
1100	10	10	10	10	10	10	10	10	10	10	10	10	15	15
1200	10	10	10	10	10	10	10	10	10	10	10	15	15	15
1300	10	10	10	10	10	10	10	10	10	10	15	15	15	15
1400	10	10	10	10	10	10	10	10	10	10	15	15	15	15
1500	10	10	10	10	10	10	10	10	15	15	15	15	15	15
1600	10	10	10	10	10	10	10	10	15	15	15	15	15	15
1700	10	10	10	10	10	10	10	15	15	15	15	15	15	15

Pneumatic Cylinder Selection Table		
Operating air pressure [Bar]	Cylinder Type	
	Piston rod Ø27 stroke L=100mm	Piston rod Ø35 stroke L=150mm
	Torque [Nm]	Torque [Nm]
2	4	10
3	6	15
4	8	20
5	10	25
6	12	30
7	14	36
8	16	41

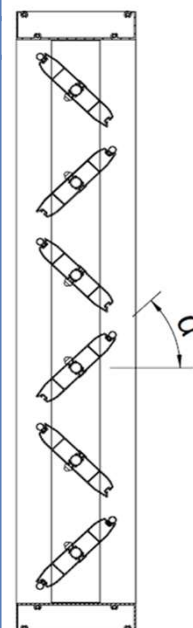


LDT-T100 AN

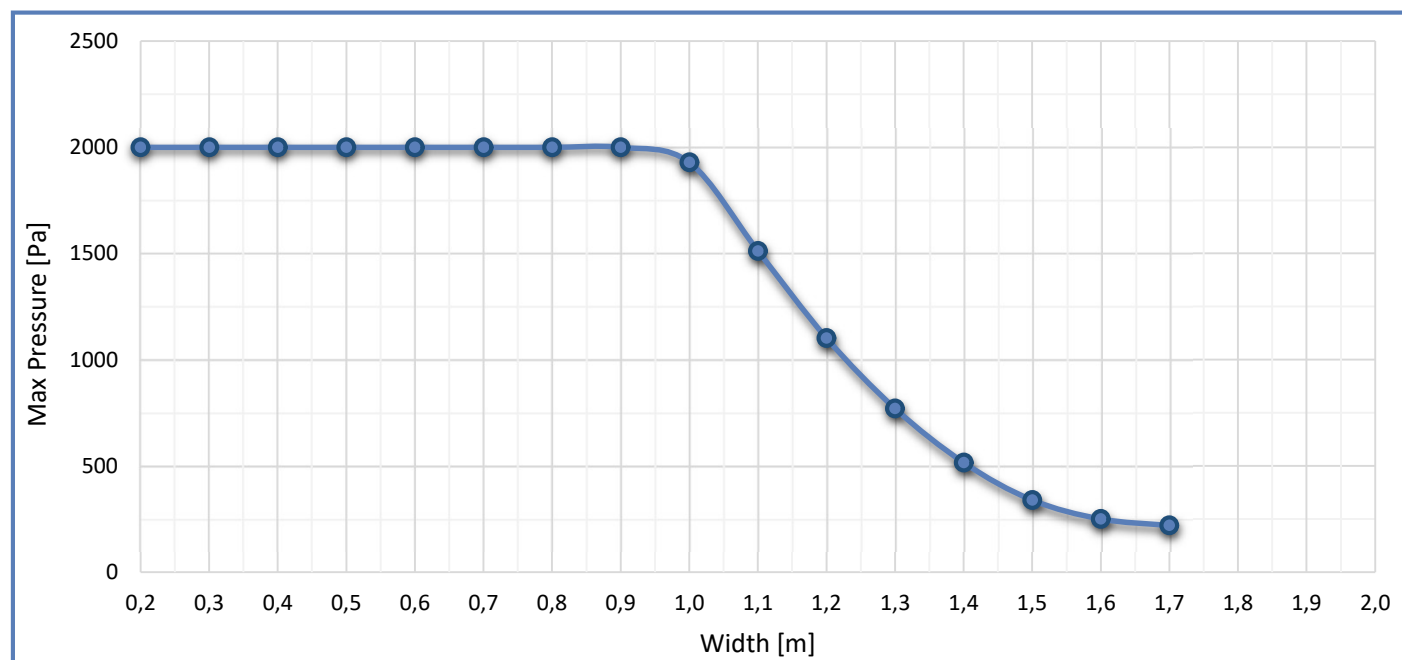
Air leakage damper 100 mm pitch in natural aluminium

Vel. [m/s]	Pressure Loss and Generated Noise Data Table LDT-T100					
	$\alpha = 0^\circ$		$\alpha = 30^\circ$		$\alpha = 60^\circ$	
	Δp [Pa]	LwA [dB(A)]	Δp [Pa]	LwA [dB(A)]	Δp [Pa]	LwA [dB(A)]
1	<5	<20	5	27	78	29
2	<5	23	23	43	320	50
3	<5	35	52	54	780	63
4	<5	43	90	62	1350	72
5	<5	49	150	66	>1500	78
6	<5	53	240	71	>1500	84
7	7	58	330	74	>1500	90
8	8	62	420	78	>1500	93
9	11	65	520	82	>1500	97
10	14	68	640	84	>1500	>100
11	17	71	800	86	>1500	>100
12	20	73	960	89	>1500	>100
13	23	75	1090	91	>1500	>100
14	27	77	1270	93	>1500	>100
15	32	79	1470	94	>1500	>100

A-A



Maximum Allowable Pressure Chart LDT-T100 AN





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mm W\H	General Weight Table LDT-T100 AN [Kg]													
	210	310	410	510	610	710	810	910	1010	1110	1210	1310	1410	1510
200	2,2	2,9	3,5	4,2	4,8	5,5	6,1	6,8	7,4	8,1	8,7	9,4	10,0	10,7
250	2,4	3,1	3,8	4,5	5,2	5,9	6,6	7,2	7,9	8,6	9,3	10,0	10,7	11,4
300	2,6	3,3	4,1	4,8	5,5	6,3	7,0	7,7	8,5	9,2	9,9	10,7	11,4	12,1
350	2,8	3,6	4,3	5,1	5,9	6,7	7,4	8,2	9,0	9,8	10,5	11,3	12,1	12,9
400	3,0	3,8	4,6	5,4	6,3	7,1	7,9	8,7	9,5	10,3	11,2	12,0	12,8	13,6
450	3,2	4,0	4,9	5,8	6,6	7,5	8,3	9,2	10,1	10,9	11,8	12,6	13,5	14,4
500	3,4	4,3	5,2	6,1	7,0	7,9	8,8	9,7	10,6	11,5	12,4	13,3	14,2	15,1
550	3,6	4,5	5,4	6,4	7,3	8,3	9,2	10,2	11,1	12,1	13,0	13,9	14,9	15,8
600	3,7	4,7	5,7	6,7	7,7	8,7	9,7	10,6	11,6	12,6	13,6	14,6	15,6	16,6
650	3,9	5,0	6,0	7,0	8,1	9,1	10,1	11,1	12,2	13,2	14,2	15,2	16,3	17,3
700	4,1	5,2	6,3	7,3	8,4	9,5	10,6	11,6	12,7	13,8	14,8	15,9	17,0	18,0
750	4,3	5,4	6,5	7,7	8,8	9,9	11,0	12,1	13,2	14,3	15,4	16,6	17,7	18,8
800	4,5	5,7	6,8	8,0	9,1	10,3	11,4	12,6	13,7	14,9	16,1	17,2	18,4	19,5
850	4,7	5,9	7,1	8,3	9,5	10,7	11,9	13,1	14,3	15,5	16,7	17,9	19,1	20,3
900	4,9	6,1	7,4	8,6	9,9	11,1	12,3	13,6	14,8	16,0	17,3	18,5	19,8	21,0
950	5,1	6,4	7,7	8,9	10,2	11,5	12,8	14,1	15,3	16,6	17,9	19,2	20,5	21,7
1000	5,3	6,6	7,9	9,2	10,6	11,9	13,2	14,5	15,9	17,2	18,5	19,8	21,1	22,5
1050	5,7	7,0	8,4	9,8	11,2	12,7	14,1	15,5	16,9	18,3	19,7	21,1	22,5	23,9
1100	6,1	7,5	8,9	10,3	11,7	13,1	14,5	15,9	17,3	18,7	20,1	21,5	22,9	24,3
1150	6,5	7,9	9,4	10,8	12,3	13,7	15,2	16,6	18,1	19,5	21,0	22,4	23,9	25,3
1200	6,9	8,4	9,9	11,4	12,9	14,4	15,9	17,3	18,8	20,3	21,8	23,3	24,8	26,3
1250	7,3	8,9	10,4	11,9	13,5	15,0	16,5	18,1	19,6	21,1	22,7	24,2	25,7	27,3
1300	7,8	9,3	10,9	12,5	14,1	15,6	17,2	18,8	20,4	21,9	23,5	25,1	26,7	28,2
1350	8,2	9,8	11,4	13,0	14,7	16,3	17,9	19,5	21,1	22,7	24,4	26,0	27,6	29,2
1400	8,6	10,3	11,9	13,6	15,3	16,9	18,6	20,2	21,9	23,6	25,2	26,9	28,5	30,2
1450	9,1	10,8	12,5	14,2	15,9	17,6	19,3	21,0	22,7	24,4	26,1	27,8	29,5	31,2
1500	9,5	11,2	13,0	14,7	16,5	18,2	19,9	21,7	23,4	25,2	26,9	28,7	30,4	32,1
1550	9,9	11,7	13,5	15,3	17,1	18,8	20,6	22,4	24,2	26,0	27,8	29,5	31,3	33,1
1600	10,4	12,2	14,0	15,8	17,7	19,5	21,3	23,1	25,0	26,8	28,6	30,4	32,3	34,1
1650	10,8	12,6	14,5	16,4	18,3	20,1	22,0	23,9	25,7	27,6	29,5	31,3	33,2	35,1
1700	11,2	13,1	15,0	16,9	18,9	20,8	22,7	24,6	26,5	28,4	30,3	32,2	34,1	36,0



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ATEX Compliance:

The product is available in a version compliant with ATEX Directive 2014/34/EU for installation in **potentially explosive atmospheres**, classified as Zone 1 or 2 (gas) or Zone 21 or 22 (dust), depending on the requirements.

If fully motorized versions are requested, it is mandatory to use **ATEX-certified components** (for our certification, only Schischek-Rotork actuators may be used) and to follow the installation instructions specified for these environments.

ATEX EXECUTION and available CERTIFICATIONS:

- Bronze bushings (standard for air leakage damper);
- For manual operation, round control shaft Ø12 mm, L=100 mm (standard shaft);
- For motorized versions, Schischek kit added with control square shaft 12x12 / 16x16 (AISI shaft);
- Grounding tab with corresponding label;
- ATEX certificate.



ATEX version damper simple without actuator equipped with free round control shaft Ø12 mm L=100mm and/or with manual control (optional heating cables can be installed on the damper).
SUITABLE FOR ZONE 1, 2, 21 e 22.

Marcatura / marking

CE  II 2G Ex h IIC T6..T3 Gb
 II 2D Ex h IIC T85°C..T200°C Db

ATEX version damper with ExMax Schischek actuator supplied by us and/or only prepared with Schischek kit (optional heating cables can be installed on the damper).
SUITABLE FOR ZONE 1, 21.

Marcatura / marking

CE  II 2G Ex h IIC T6..T4 Gb
 II 2D Ex h IIC T85°C..T135°C Db

ATEX version damper with RedMax Schischek actuator supplied by us and/or only prepared with Schischek kit (optional heating cables can be installed on the damper).
SUITABLE FOR ZONE 2, 22.

Marcatura / marking

CE  II 3G Ex h IIC T6..T4 Gb
 II 3D Ex h IIC T85°C..T135°C Db

ATEX version damper (Non-Certified) intended for safe areas and does not require certification. Available with free round control shaft Ø12 mm L=100mm and/or manual control mounted, or with InMax Schischek actuator supplied by us and/or only prepared with Schischek kit (optional heating cables can be installed on the damper).
SUITABLE FOR SAFE AREAS.

Kit Schischek Tg.S - Plate support + Square shaft 12x12;



Kit Schischek Tg.M - Plate support + Square shaft 16x16;



AZIENDA CON SISTEMA
DI GESTIONE QUALITÀ
CERTIFICATO DA DNV GL
ISO 9001

AZIENDA CON
SISTEMA DI GESTIONE
AMBIENTALE CERTIFICATO
DA DNV
ISO 14001



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