DLT100 X4-X6

CLASSE TENUTA AIR LEAKAGE CLASSIFICATION · EN 1751:2014 1 A · EN 1751:2024 1 ATC5

Regulation damper 100 mm pitch in stainless steel AISI 304 or stainless steel AISI 316L

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 for balancing, setting and regulating airflow in HVAC systems, it is 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 stainless steel AISI 304 finishing 2B;
- Frame thickness 1 mm, riveted, depth 130 mm;
- Flange 40mm drilled Ø9 pitch 300mm with BM=20mm;
- Blades double skin thickness 0,6+0,6 mm;
- Blade pitch 100 mm with opposed movement operation;
- Central separator with "C" profile for dipendent double field when Width > 1700 mm;
- Side sealing strips in raw stainless steel AISI 301;
- Nylon bushings;
- Stub shafts Ø12 mm in stainless steel AISI 303;
- Blades movement by external linkage in SS AISI 304;
- Control shaft Ø12 extended L=100mm;
- Control plate suitable for manual operation and/or motorized actuator (for models with anti-rotation rod);
- Metal stops on the frame for blade end position;
- Silicone free.

Available execution:
- Made of stainless steel AISI 316L finishing 2B (**X6** version);
- Atex version (see page 7).

Operating limits:
- Maximum dimensions WxH: 2800x2010 mm;
- Temperature range: from -20* to +80 °C (see option page 2);
- Dimensional drawing and drilling pattern: page 3;
- V max recommended: 15 m/s (see table page 5);
- Performance and Allowable Pressure: see 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 at Istituto Giordano (test report no. 136363);
- Self-generated noise tests carried out in accordance with UNI EN 25135 at Istituto Giordano (test report no. 148829);
- 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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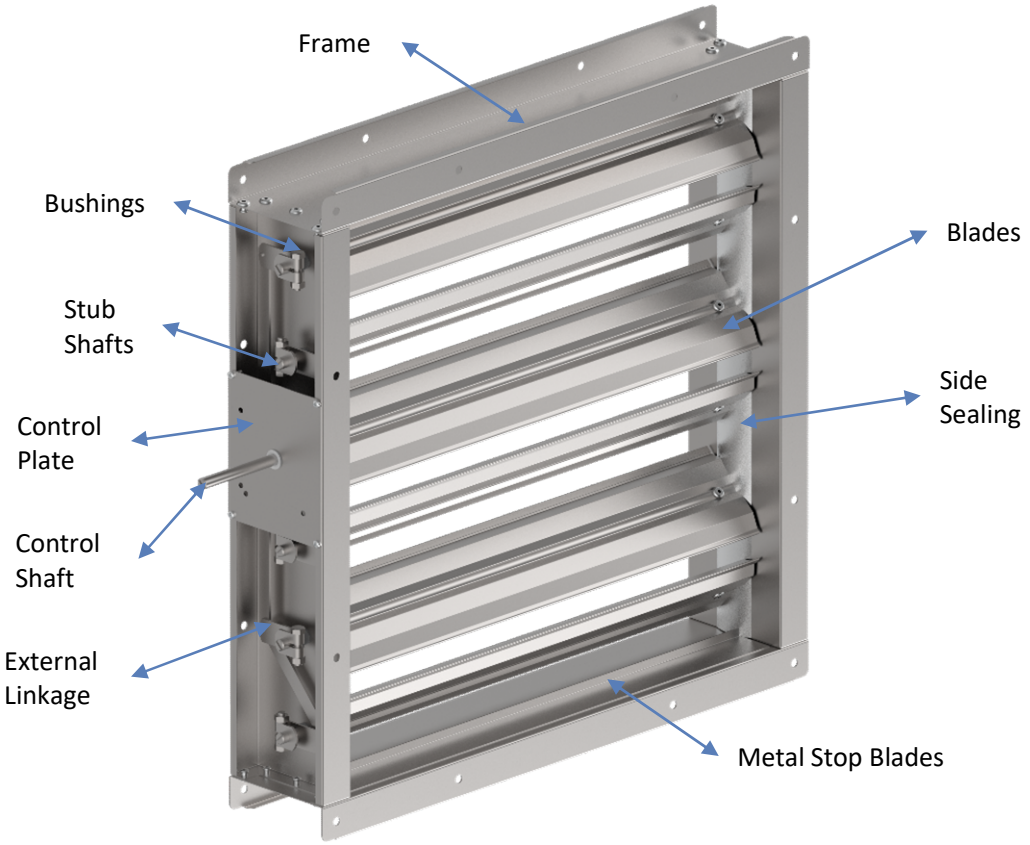
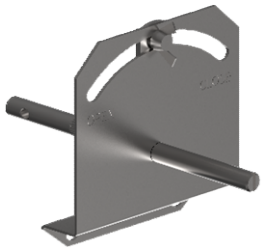
Additional Construction Details



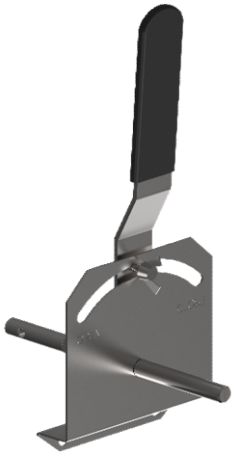
Available Controls, Options, Accessories and Actuators

Manual Control

R11 X4 or X6 for A < 1,2m²



R12 X4 or X6 for A > 1,2m²



Option

Bronze Bushings (T_{max} +200°C)

Teflon Bushings (T_{max} +250°C)

Accessories

Control shaft with extended end Ø18 - R20 X4 or X6

Internal control plate support R21 X4 or X6

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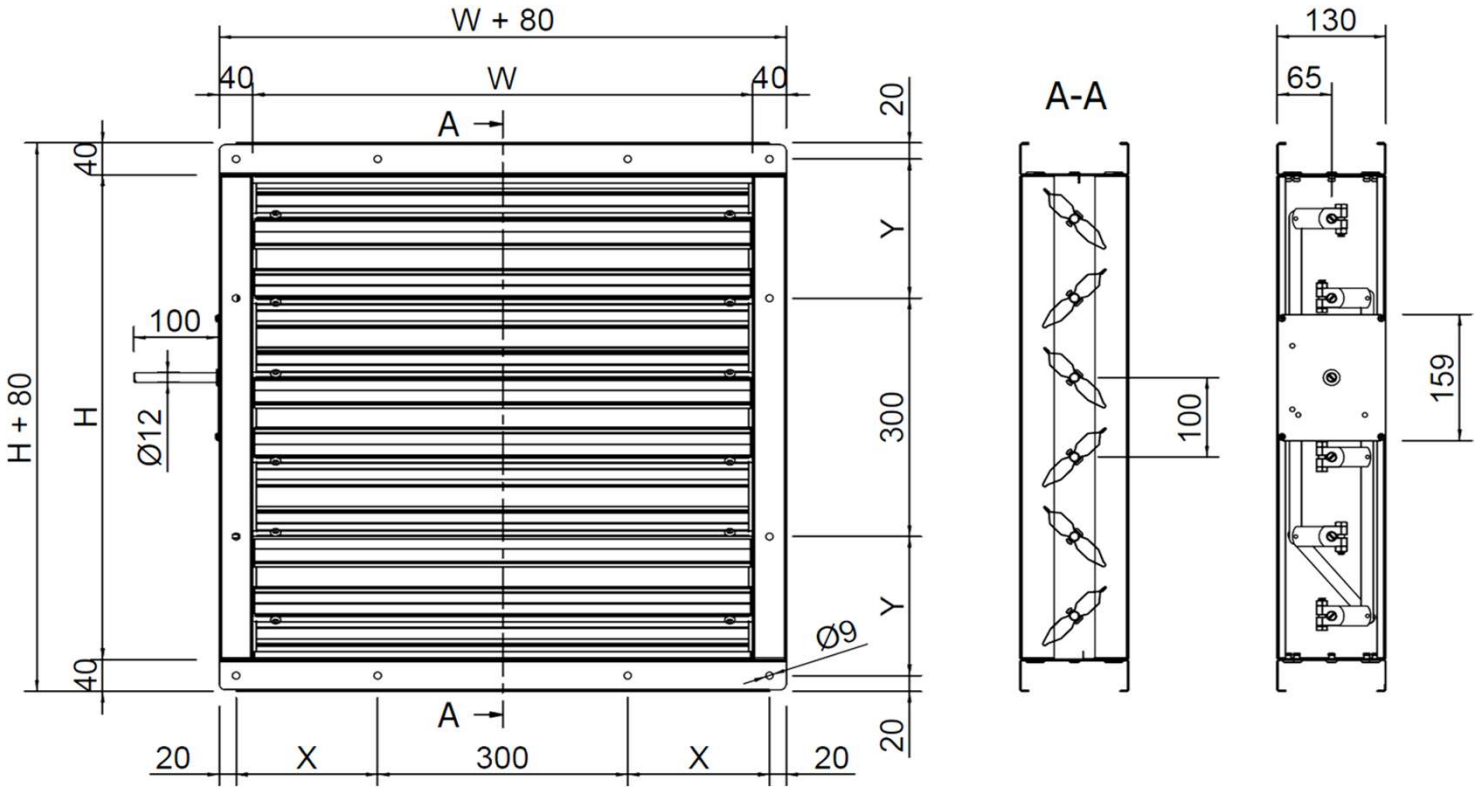
Dimensional Drawing and Standard Drilling Pattern (size in mm, always referred to the inside of the flanges)



Nr. 4 HOLES CENTERED IN THE CORNERS ALWAYS PRESENT												
WIDTH DRILLING						HEIGHT DRILLING					
W	N°HOLES	X	W	N°HOLES	X	H	N°HOLES	Y	H	N°HOLES	Y
200	\	\	1100	3	270	210	\	\	1110	3	275
250	\	\	1200	3	320	250	\	\	1150	3	295
300	\	\	1300	4	220	310	\	\	1210	3	325
350	\	\	1400	4	270	350	\	\	1250	3	345
400	1	220	1500	4	320	410	1	225	1310	4	225
450	1	245	1600	5	220	450	1	245	1350	4	245
500	1	270	1700	5	270	510	1	275	1410	4	275
550	1	295	1800	5	320	550	1	295	1450	4	295
600	1	320	1900	6	220	610	1	325	1510	4	325
650	1	345	2000	6	270	650	1	345	1550	4	345
700	2	220	2100	6	320	710	2	225	1610	5	225
750	2	245	2200	7	220	750	2	245	1650	5	245
800	2	270	2300	7	270	810	2	275	1710	5	275
850	2	295	2400	7	320	850	2	295	1750	5	295
900	2	320	2500	8	220	910	2	325	1810	5	325
950	2	345	2600	8	270	950	2	345	1850	5	345
1000	3	220	2700	8	320	1010	3	225	1910	6	225
1050	3	245	2800	9	220	1050	3	245	2010	6	275

***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 369.5 mm, the number of holes must refer to the next higher dimension .*

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Regulation damper 100 mm pitch in stainless steel AISI 304 or stainless steel AISI 316L

mm	Actuator Torque Selection Table DLT100 X [Nm]																	
W\H	210	310	410	510	610	710	810	910	1010	1110	1210	1310	1410	1510	1610	1710	1810	1910	2010
200	3	3	3	3	3	5	5	5	5	5	5	5	5	5	5	5	10	10	10
300	3	3	3	3	3	5	5	5	5	5	5	5	5	5	5	10	10	10	10
400	3	3	3	3	3	5	5	5	5	5	5	5	5	5	10	10	10	10	10
500	3	3	3	3	3	5	5	5	5	5	5	5	5	10	10	10	10	10	10
600	3	3	3	3	3	5	5	5	5	5	5	5	5	10	10	10	10	10	10
700	5	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10
800	5	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10
900	5	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	10
1000	5	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	10	15
1100	5	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	15	15	15
1200	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	15	15	15	15
1300	5	5	5	5	5	5	10	10	10	10	10	10	10	10	10	15	15	15	20
1400	5	5	5	5	5	5	10	10	10	10	10	10	10	15	15	15	15	20	20
1500	5	5	5	5	5	10	10	10	10	10	10	10	15	15	15	15	20	20	20
1600	5	5	5	5	5	10	10	10	10	10	10	15	15	15	15	20	20	20	20
1700	5	5	5	5	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20
W	Central Separator with "C" Profile for Double Dependent Field																		
1800	5	5	5	10	10	10	10	10	10	15	15	15	15	20	20	20	20	20	25
1900	5	5	5	10	10	10	10	10	10	15	15	15	15	20	20	20	20	25	25
2000	5	5	10	10	10	10	10	10	15	15	15	15	20	20	20	20	25	25	25
2100	5	5	10	10	10	10	10	10	15	15	15	20	20	20	20	25	25	25	30
2200	5	10	10	10	10	10	10	15	15	15	20	20	20	20	25	25	25	25	30
2300	5	10	10	10	10	10	10	15	15	15	20	20	20	20	25	25	25	30	30
2400	10	10	10	10	10	10	10	15	15	20	20	20	20	25	25	25	30	30	30
2500	10	10	10	10	10	10	15	15	15	20	20	20	25	25	25	30	30	30	30
2600	10	10	10	10	10	10	15	15	20	20	20	20	25	25	30	30	30	30	30
2700	10	10	10	10	10	10	15	15	20	20	20	25	25	30	30	30	30	30	30
2800	10	10	10	10	10	15	15	20	20	20	20	25	30	30	30	30	30	30	30

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

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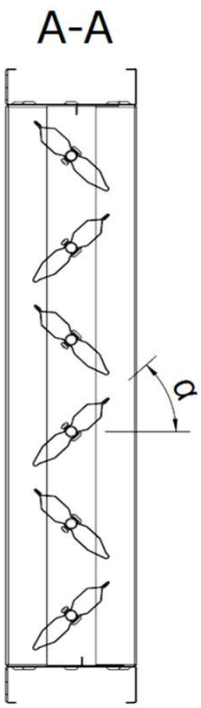
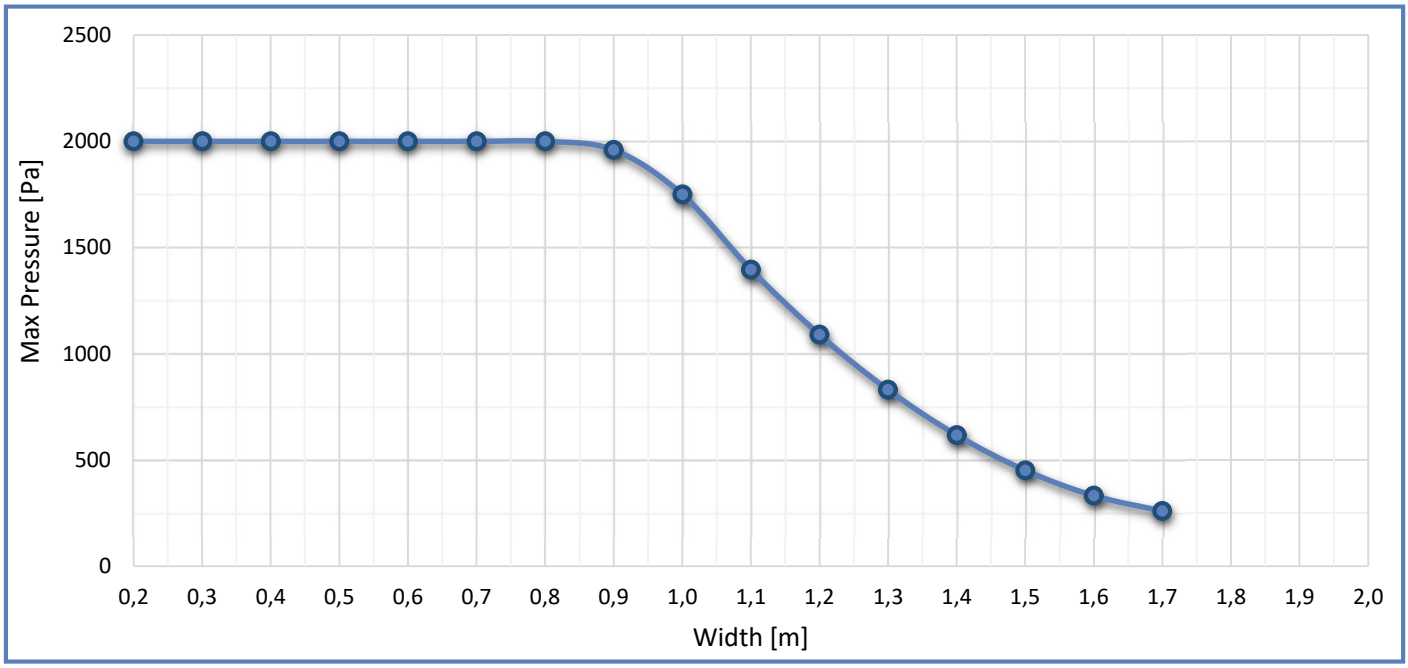
Vel. [m/s]	Pressure Drop and Generated Noise Data Table DLT100					
	α = 0°		α = 30°		α = 60°	
	Δp [Pa]	LwA [dB(A)]	Δp [Pa]	LwA [dB(A)]	Δp [Pa]	LwA [dB(A)]
1	<5	<20	5	27	78	29
2	<5	23	23	43	320	50
3	<5	35	52	54	780	63
4	<5	43	90	62	1350	72
5	<5	49	150	66	>1500	78
6	<5	53	240	71	>1500	84
7	7	58	330	74	>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



Maximum Allowable Pressure Chart DLT100 X



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Regulation damper 100 mm pitch in stainless steel AISI 304 or stainless steel AISI 316L

mm	General Weight Table DLT100 X [Kg]																		
W\H	210	310	410	510	610	710	810	910	1010	1110	1210	1310	1410	1510	1610	1710	1810	1910	2010
200	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	16,0	16,9	17,8	18,7	19,6
300	4,1	5,1	6,1	7,1	8,1	9,1	10,1	11,1	12,1	13,1	14,1	15,1	16,1	17,1	18,1	19,1	20,1	21,1	22,1
400	4,7	5,8	6,9	8,0	9,1	10,3	11,4	12,5	13,6	14,7	15,8	16,9	18,0	19,1	20,2	21,4	22,5	23,6	24,7
500	5,4	6,6	7,8	9,1	10,3	11,5	12,7	13,9	15,2	16,4	17,6	18,8	20,0	21,3	22,5	23,7	24,9	26,1	27,4
600	6,0	7,3	8,6	10,0	11,3	12,6	14,0	15,3	16,6	18,0	19,3	20,6	21,9	23,3	24,6	25,9	27,3	28,6	29,9
700	6,6	8,1	9,5	11,0	12,4	13,8	15,3	16,7	18,2	19,6	21,0	22,5	23,9	25,4	26,8	28,2	29,7	31,1	32,6
800	7,3	8,8	10,4	11,9	13,5	15,0	16,6	18,1	19,7	21,2	22,8	24,3	25,9	27,4	29,0	30,5	32,1	33,6	35,2
900	7,9	9,6	11,3	12,9	14,6	16,2	17,9	19,6	21,2	22,9	24,5	26,2	27,9	29,5	31,2	32,8	34,5	36,2	37,8
1000	8,6	10,4	12,1	13,9	15,7	17,4	19,2	21,0	22,8	24,5	26,3	28,1	29,8	31,6	33,4	35,1	36,9	38,7	40,5
1100	9,2	11,1	13,0	14,9	16,8	18,6	20,5	22,4	24,3	26,2	28,0	29,9	31,8	33,7	35,6	37,4	39,3	41,2	43,1
1200	9,9	11,9	13,9	15,9	17,9	19,8	21,8	23,8	25,8	27,8	29,8	31,8	33,8	35,8	37,8	39,7	41,7	43,7	45,7
1300	10,5	12,6	14,7	16,8	18,9	21,0	23,1	25,2	27,3	29,4	31,5	33,6	35,7	37,8	39,9	42,0	44,1	46,2	48,3
1400	11,2	13,4	15,6	17,8	20,0	22,3	24,5	26,7	28,9	31,1	33,3	35,5	37,7	39,9	42,1	44,4	46,6	48,8	51,0
1500	11,9	14,2	16,5	18,8	21,1	23,5	25,8	28,1	30,4	32,7	35,0	37,3	39,6	41,9	44,2	46,6	48,9	51,2	53,5
1600	12,5	14,9	17,4	19,8	22,2	24,6	27,1	29,5	31,9	34,3	36,8	39,2	41,6	44,0	46,5	48,9	51,3	53,7	56,2
1700	13,2	15,7	18,3	20,8	23,3	25,9	28,4	31,0	33,5	36,0	38,6	41,1	43,6	46,2	48,7	51,3	53,8	56,3	58,9
W	Central Separator with "C" Profile for Double Dependent Field																		
1800	14,3	17,2	20,1	23,0	25,9	28,8	31,7	34,6	37,5	40,4	43,3	46,2	49,1	52,0	54,9	57,8	60,7	63,6	66,5
1900	14,9	18,0	21,0	24,0	27,0	30,0	33,0	36,0	39,0	42,0	45,0	48,0	51,1	54,1	57,1	60,1	63,1	66,1	69,1
2000	15,6	18,7	21,8	25,0	28,1	31,2	34,3	37,4	40,6	43,7	46,8	49,9	53,0	56,1	59,3	62,4	65,5	68,6	71,7
2100	16,3	19,5	22,7	25,9	29,2	32,4	35,6	38,9	42,1	45,3	48,5	51,8	55,0	58,2	61,5	64,7	67,9	71,1	74,4
2200	16,9	20,3	23,6	26,9	30,3	33,6	37,0	40,3	43,6	47,0	50,3	53,7	57,0	60,3	63,7	67,0	70,4	73,7	77,0
2300	17,6	21,0	24,5	27,9	31,4	34,8	38,2	41,7	45,1	48,6	52,0	55,5	58,9	62,4	65,8	69,3	72,7	76,2	79,6
2400	18,2	21,8	25,3	28,9	32,4	36,0	39,6	43,1	46,7	50,2	53,8	57,4	60,9	64,5	68,0	71,6	75,2	78,7	82,3
2500	18,9	22,5	26,2	29,9	33,5	37,2	40,9	44,5	48,2	51,9	55,5	59,2	62,9	66,6	70,2	73,9	77,6	81,2	84,9
2600	19,5	23,3	27,1	30,8	34,6	38,4	42,2	46,0	49,7	53,5	57,3	61,1	64,9	68,6	72,4	76,2	80,0	83,8	87,5
2700	20,2	24,1	27,9	31,8	35,7	39,6	43,5	47,4	51,3	55,2	59,1	62,9	66,8	70,7	74,6	78,5	82,4	86,3	90,2
2800	20,8	24,8	28,8	32,8	36,8	40,8	44,8	48,8	52,8	56,8	60,8	64,8	68,8	72,8	76,8	80,8	84,8	88,8	92,8

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Regulation damper 100 mm pitch in stainless steel AISI 304 or stainless steel AISI 316L

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 (maximum temperature +200 °C);
- 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;
- 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 Ex II 2G Ex h IIC T6..T3 Gb
II 2D Ex h IIIC 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 Ex II 2G Ex h IIC T6..T4 Gb
II 2D Ex h IIIC 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 Ex II 3G Ex h IIC T6..T4 Gb
II 3D Ex h IIIC 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;

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

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