

# DLT-T100 X4-X6

CLASSE TENUTA  
AIR LEAKAGE CLASSIFICATION

EN 1751:2014

3

C

EN 1751:2024

3

ATC3



Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

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 stainless steel AISI304 finishing 2B;
- Frame thickness 1 mm, riveted, depth 130 mm;
- Frame internally sealed at the corners to ensure air tightness;
- Flange 40mm drilled  $\varnothing 9$  pitch 300mm with BM=20mm;
- Blades double skin 0,6+0,6 mm with silicone sealing gasket;
- Blade pitch 100 mm with opposed movement operation;
- Side sealing strips in raw stainless steel AISI301;
- Bronze bushings;
- Stub shafts  $\varnothing 12$  mm in stainless steel AISI303;
- Blades movement by external linkage in stainless steel AISI304;
- Control shaft  $\varnothing 12$  extended L=100mm;
- Control plate suitable for manual operation and/or motorized actuator (for models with anti-rotation rod).

## Available execution:

- Made of stainless steel AISI316L finishing 2B (X6 version);
- Atex version (see page 7).

## Operating limits:

- Maximum dimensions WxH: 1700x1510 mm;
- Temperature range: from -20\* to +180 °C;
- Dimensional drawing and 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:

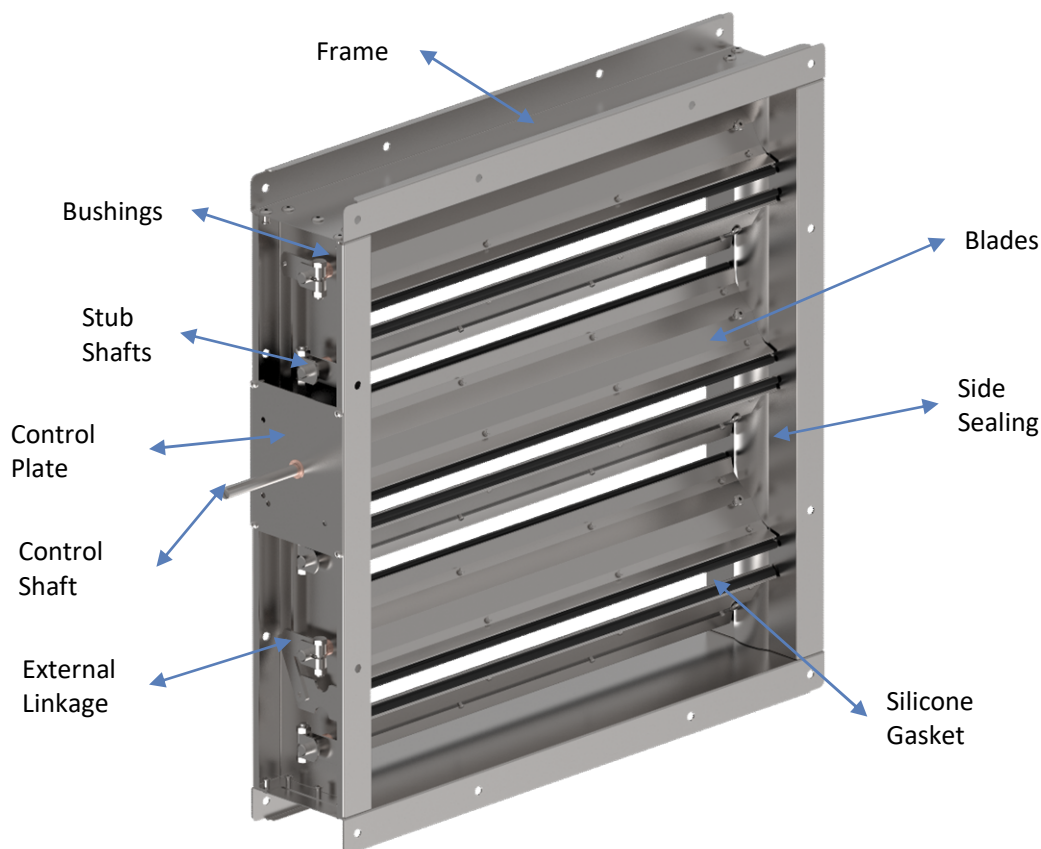
- Pressure drop tests carried out in accordance with ISO 7244;
- Self-generated noise tests carried out in accordance with UNI EN 25135;
- Air leakage tests carried out in accordance with DIN 1946/4;
- Air leakage tests carried out in accordance with EN 1751.



# DLT-T100 X4-X6

Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

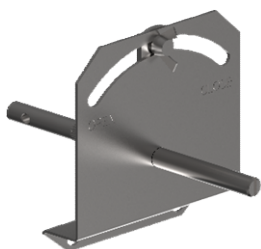
## Additional Construction Details



## Available Controls, Options, Accessories and Actuators

### Manual Control

R11 X4 or X6 for  $A < 1,2m^2$



R12 X4 or X6 for  $A > 1,2m^2$



### Option

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

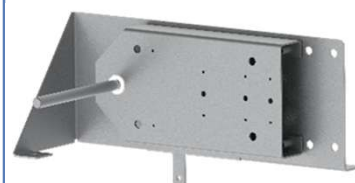


### Accessories

Control shaft with extended end  
 $\varnothing 18$  - 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

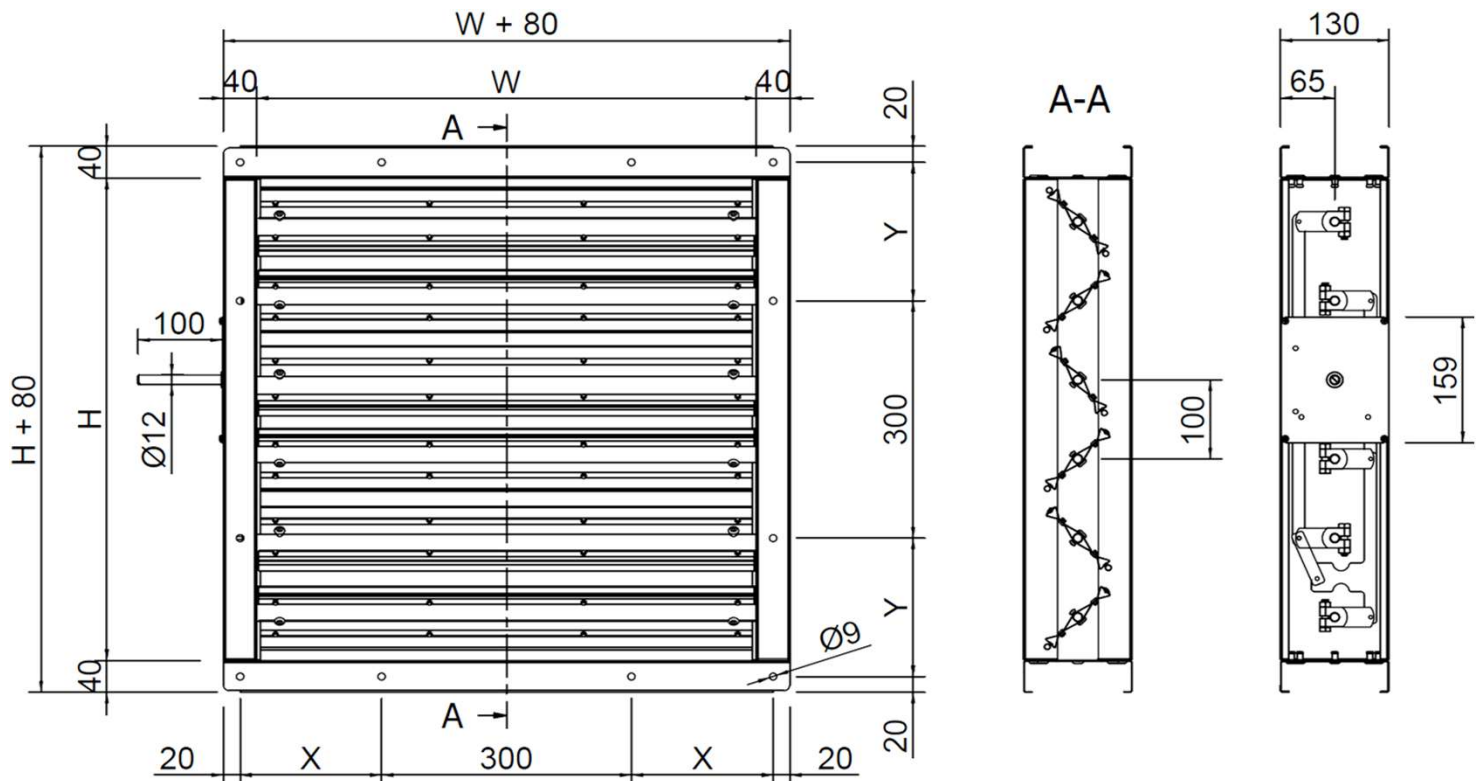




# DLT-T100 X4-X6

Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

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            | \       | \   | 1150 | 3       | 295 | 250             | \       | \   | 1150 | 3       | 295 |
| 300            | \       | \   | 1200 | 3       | 320 | 310             | \       | \   | 1210 | 3       | 325 |
| 350            | \       | \   | 1250 | 3       | 345 | 350             | \       | \   | 1250 | 3       | 345 |
| 400            | 1       | 220 | 1300 | 4       | 220 | 410             | 1       | 225 | 1310 | 4       | 225 |
| 450            | 1       | 245 | 1350 | 4       | 245 | 450             | 1       | 245 | 1350 | 4       | 245 |
| 500            | 1       | 270 | 1400 | 4       | 270 | 510             | 1       | 275 | 1410 | 4       | 275 |
| 550            | 1       | 295 | 1450 | 4       | 295 | 550             | 1       | 295 | 1450 | 4       | 295 |
| 600            | 1       | 320 | 1500 | 4       | 320 | 610             | 1       | 325 | 1510 | 4       | 325 |
| 650            | 1       | 345 | 1550 | 4       | 345 | 650             | 1       | 345 |      |         |     |
| 700            | 2       | 220 | 1600 | 5       | 220 | 710             | 2       | 225 |      |         |     |
| 750            | 2       | 245 | 1650 | 5       | 245 | 750             | 2       | 245 |      |         |     |
| 800            | 2       | 270 | 1700 | 5       | 270 | 810             | 2       | 275 |      |         |     |
| 850            | 2       | 295 |      |         |     | 850             | 2       | 295 |      |         |     |
| 900            | 2       | 320 |      |         |     | 910             | 2       | 325 |      |         |     |
| 950            | 2       | 345 |      |         |     | 950             | 2       | 345 |      |         |     |
| 1000           | 3       | 220 |      |         |     | 1010            | 3       | 225 |      |         |     |
| 1050           | 3       | 245 |      |         |     | 1050            | 3       | 245 |      |         |     |

**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 .



## DLT-T100 X4-X6

Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

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

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

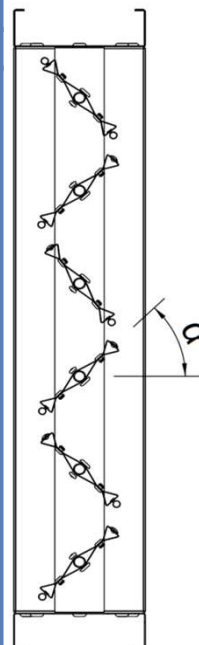


## DLT-T100 X4-X6

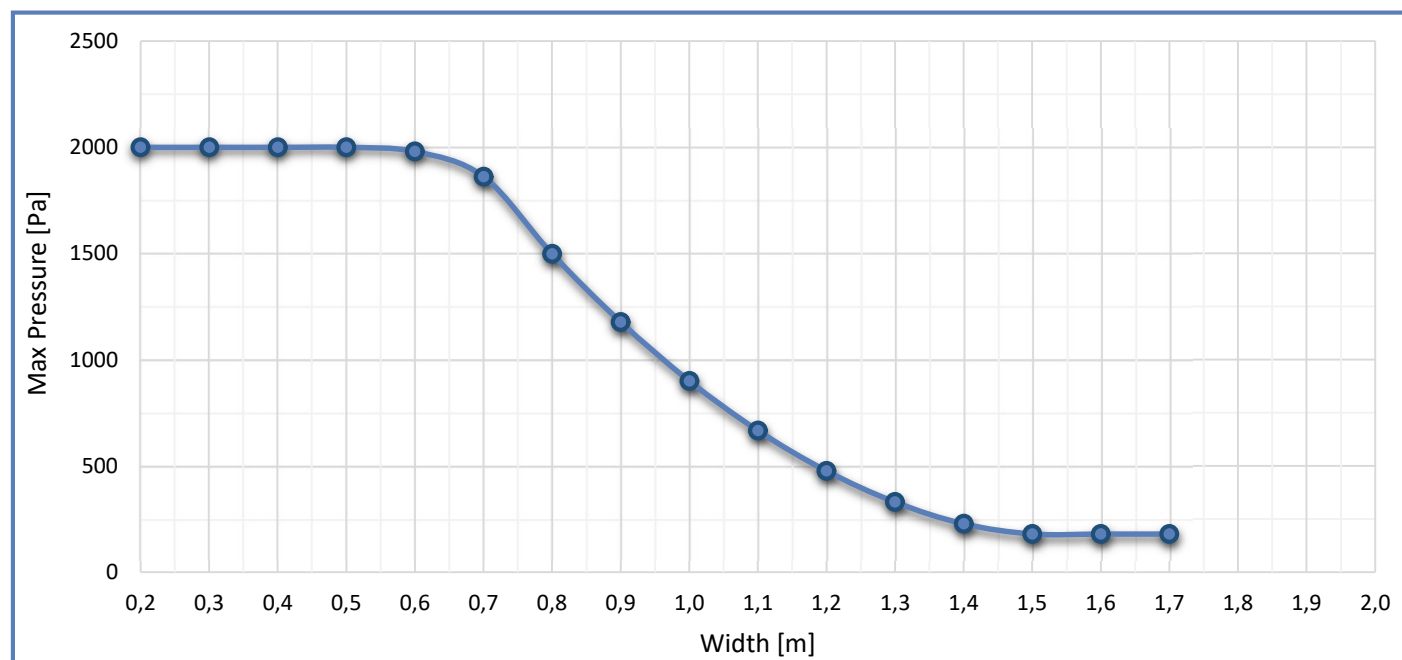
Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

| Vel.<br>[m/s] | Pressure Loss and Generated Noise Data Table DLT-T100 |             |                     |             |                     |             |
|---------------|-------------------------------------------------------|-------------|---------------------|-------------|---------------------|-------------|
|               | $\alpha = 0^\circ$                                    |             | $\alpha = 30^\circ$ |             | $\alpha = 60^\circ$ |             |
|               | $\Delta p$ [Pa]                                       | LwA [dB(A)] | $\Delta p$ [Pa]     | LwA [dB(A)] | $\Delta p$ [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 DLT-T100 X





## DLT-T100 X4-X6

Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

| mm   | General Weight Table DLT-T100 X [Kg] |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| W\H  | 210                                  | 310  | 410  | 510  | 610  | 710  | 810  | 910  | 1010 | 1110 | 1210 | 1310 | 1410 | 1510 |
| 200  | 3,5                                  | 4,4  | 5,3  | 6,2  | 7,1  | 8,0  | 8,9  | 9,8  | 10,7 | 11,6 | 12,5 | 13,4 | 14,3 | 15,2 |
| 250  | 3,9                                  | 4,8  | 5,8  | 6,7  | 7,7  | 8,7  | 9,6  | 10,6 | 11,6 | 12,5 | 13,5 | 14,5 | 15,4 | 16,4 |
| 300  | 4,2                                  | 5,2  | 6,3  | 7,3  | 8,3  | 9,4  | 10,4 | 11,4 | 12,4 | 13,5 | 14,5 | 15,5 | 16,6 | 17,6 |
| 350  | 4,6                                  | 5,6  | 6,7  | 7,8  | 8,9  | 10,0 | 11,1 | 12,2 | 13,3 | 14,4 | 15,5 | 16,6 | 17,7 | 18,8 |
| 400  | 4,9                                  | 6,1  | 7,2  | 8,4  | 9,5  | 10,7 | 11,9 | 13,0 | 14,2 | 15,3 | 16,5 | 17,7 | 18,8 | 20,0 |
| 450  | 5,3                                  | 6,5  | 7,7  | 8,9  | 10,2 | 11,4 | 12,6 | 13,8 | 15,1 | 16,3 | 17,5 | 18,7 | 20,0 | 21,2 |
| 500  | 5,6                                  | 6,9  | 8,2  | 9,5  | 10,8 | 12,1 | 13,3 | 14,6 | 15,9 | 17,2 | 18,5 | 19,8 | 21,1 | 22,4 |
| 550  | 6,0                                  | 7,3  | 8,7  | 10,0 | 11,4 | 12,7 | 14,1 | 15,4 | 16,8 | 18,1 | 19,5 | 20,9 | 22,2 | 23,6 |
| 600  | 6,3                                  | 7,7  | 9,1  | 10,6 | 12,0 | 13,4 | 14,8 | 16,2 | 17,7 | 19,1 | 20,5 | 21,9 | 23,3 | 24,8 |
| 650  | 6,7                                  | 8,1  | 9,6  | 11,1 | 12,6 | 14,1 | 15,6 | 17,0 | 18,5 | 20,0 | 21,5 | 23,0 | 24,5 | 26,0 |
| 700  | 7,0                                  | 8,6  | 10,1 | 11,7 | 13,2 | 14,8 | 16,3 | 17,9 | 19,4 | 21,0 | 22,5 | 24,1 | 25,6 | 27,2 |
| 750  | 7,4                                  | 9,0  | 10,6 | 12,2 | 13,8 | 15,4 | 17,0 | 18,7 | 20,3 | 21,9 | 23,5 | 25,1 | 26,7 | 28,3 |
| 800  | 7,7                                  | 9,4  | 11,1 | 12,7 | 14,4 | 16,1 | 17,8 | 19,5 | 21,1 | 22,8 | 24,5 | 26,2 | 27,9 | 29,5 |
| 850  | 8,1                                  | 9,8  | 11,5 | 13,3 | 15,0 | 16,8 | 18,5 | 20,3 | 22,0 | 23,8 | 25,5 | 27,2 | 29,0 | 30,7 |
| 900  | 8,4                                  | 10,2 | 12,0 | 13,8 | 15,6 | 17,5 | 19,3 | 21,1 | 22,9 | 24,7 | 26,5 | 28,3 | 30,1 | 31,9 |
| 950  | 8,8                                  | 10,6 | 12,5 | 14,4 | 16,3 | 18,1 | 20,0 | 21,9 | 23,8 | 25,6 | 27,5 | 29,4 | 31,3 | 33,1 |
| 1000 | 9,1                                  | 11,0 | 13,0 | 14,9 | 16,9 | 18,8 | 20,7 | 22,7 | 24,6 | 26,6 | 28,5 | 30,4 | 32,4 | 34,3 |
| 1050 | 9,5                                  | 11,5 | 13,5 | 15,5 | 17,5 | 19,5 | 21,5 | 23,5 | 25,5 | 27,5 | 29,5 | 31,5 | 33,5 | 35,5 |
| 1100 | 9,8                                  | 11,9 | 13,9 | 16,0 | 18,1 | 20,2 | 22,2 | 24,3 | 26,4 | 28,4 | 30,5 | 32,6 | 34,6 | 36,7 |
| 1150 | 10,2                                 | 12,3 | 14,4 | 16,6 | 18,7 | 20,8 | 23,0 | 25,1 | 27,2 | 29,4 | 31,5 | 33,6 | 35,8 | 37,9 |
| 1200 | 10,5                                 | 12,7 | 14,9 | 17,1 | 19,3 | 21,5 | 23,7 | 25,9 | 28,1 | 30,3 | 32,5 | 34,7 | 36,9 | 39,1 |
| 1250 | 10,9                                 | 13,1 | 15,4 | 17,6 | 19,9 | 22,2 | 24,4 | 26,7 | 29,0 | 31,2 | 33,5 | 35,8 | 38,0 | 40,3 |
| 1300 | 11,2                                 | 13,5 | 15,9 | 18,2 | 20,5 | 22,9 | 25,2 | 27,5 | 29,8 | 32,2 | 34,5 | 36,8 | 39,2 | 41,5 |
| 1350 | 11,6                                 | 13,9 | 16,3 | 18,7 | 21,1 | 23,5 | 25,9 | 28,3 | 30,7 | 33,1 | 35,5 | 37,9 | 40,3 | 42,7 |
| 1400 | 11,9                                 | 14,4 | 16,8 | 19,3 | 21,7 | 24,2 | 26,7 | 29,1 | 31,6 | 34,0 | 36,5 | 39,0 | 41,4 | 43,9 |
| 1450 | 12,3                                 | 14,8 | 17,3 | 19,8 | 22,4 | 24,9 | 27,4 | 29,9 | 32,5 | 35,0 | 37,5 | 40,0 | 42,6 | 45,1 |
| 1500 | 12,6                                 | 15,2 | 17,8 | 20,4 | 23,0 | 25,6 | 28,1 | 30,7 | 33,3 | 35,9 | 38,5 | 41,1 | 43,7 | 46,3 |
| 1550 | 13,0                                 | 15,6 | 18,3 | 20,9 | 23,6 | 26,2 | 28,9 | 31,5 | 34,2 | 36,8 | 39,5 | 42,2 | 44,8 | 47,5 |
| 1600 | 13,3                                 | 16,0 | 18,7 | 21,5 | 24,2 | 26,9 | 29,6 | 32,3 | 35,1 | 37,8 | 40,5 | 43,2 | 45,9 | 48,7 |
| 1650 | 13,7                                 | 16,4 | 19,2 | 22,0 | 24,8 | 27,6 | 30,4 | 33,1 | 35,9 | 38,7 | 41,5 | 44,3 | 47,1 | 49,9 |
| 1700 | 14,0                                 | 16,9 | 19,7 | 22,6 | 25,4 | 28,3 | 31,1 | 34,0 | 36,8 | 39,7 | 42,5 | 45,4 | 48,2 | 51,1 |



## DLT-T100 X4-X6

Air leakage damper 100 mm pitch in stainless steel AISI304 or stainless steel AISI316L

### 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;
- 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 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  **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  **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;

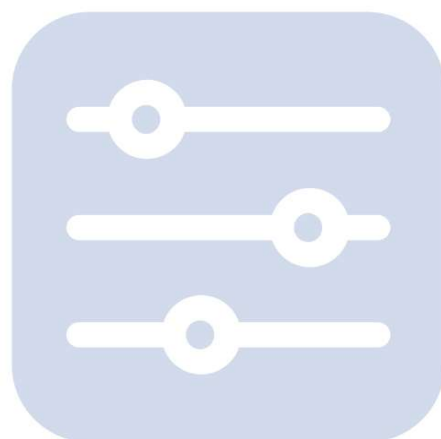
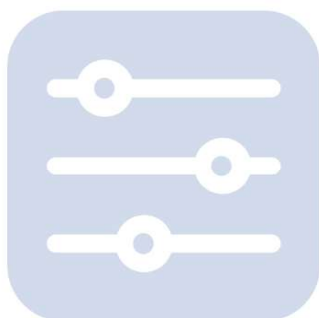
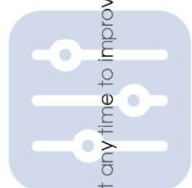


AZIENDA CON SISTEMA  
DI GESTIONE QUALITÀ  
CERTIFICATO DA DNV GL  
ISO 9001

AZIENDA CON  
SISTEMA DI GESTIONE  
AMBIENTALE CERTIFICATO  
DA DNV  
ISO 14001



CLA & UTEK reserves the right to make any necessary changes at any time to improve the products, without prior notice.



C.L.A. S.r.l. Via Strada Artigianale Angelo Lapsus 310, 23036 San Giacomo di Teglio (So) Italy Tel.+39 0342 786116 | [utek-air.it](mailto:utek-air.it) | [cla-air.it](http://cla-air.it)

DAMPERS