

# ETT100 Galvanised steel regulation dampers for high temperatures 100 mm pitch



## Description

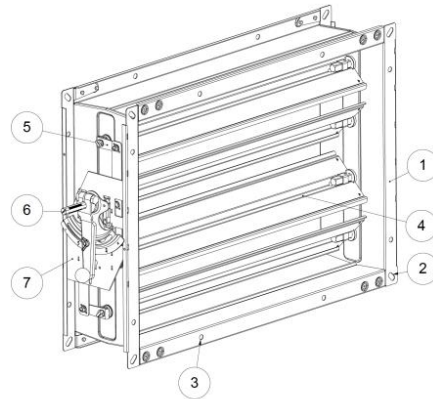
Patented rectangular galvanised steel regulation dampers for high temperatures with a 100 mm pitch, with steel rotating pins on brass bushings. They can be used for the regulation and balancing of air flow rates and pressures in air conditioning and ventilation systems and in air handling units. This innovative damper, thanks to the special shaping of its frame and the blade stops, guarantees significant advantages:

- 1) completely free air passage;
  - 2) strong reduction in pressure drop;
  - 3) strong reduction in self-generated noise.
- These features also guarantee limited air leakage when the damper is closed.

An innovative universal metal plate allows for the application of all manual or motorised controls. The opening and closing of the blades takes place by means of a manual control located on one side of the damper, connected to an external lever system. The same movement can be achieved by means of a wide range of servomotors that allow for a more accurate regulation of the passage of air in the duct.

## Construction details

- 1) Flanged frame;
- 2) Slotted holes for fastening;
- 3) Additional holes for fastening;
- 4) Regulation blades;
- 5) Steel levers and pins;
- 6) Control pin;
- 7) Universal plate for manual control or servomotor.



## Constructive features

Material: galvanised steel frame, blades and external levers, galvanised steel control pin  $\varnothing 12$  mm, brass bushings.

Installation: by means of bolts on slotted holes (detail 2) located in the corners of the frame and on additional intermediate holes (detail 3)

Operating temperature:  $-20^{\circ}\text{C}$   $+150^{\circ}\text{C}$

## Available models

- ETT100P damper with blades with opposing movement with pin diam. 12 mm;
- ETT100C damper with blades with opposing movement with manual control (accessory).

## Models on request

- ETT100P damper with blades with parallel movement with pin diam. 12 mm;
- ETT100C damper with blades with opposing movement with manual control (accessory).

## Accessories:

EARG175K: manual control;

BELIMO SERVOMOTOR: electronic servomotor

## Nominal size

For dampers with a width (L)  $> 1250$  mm  $\leq 2500$  mm, a 30 mm thick breaker will be placed in a central position.

For dampers with a width (L)  $> 2500$  mm  $\leq 3000$  mm, two 30 mm thick breakers will be placed at the same distance.

The dampers can have the following maximum dimensions:

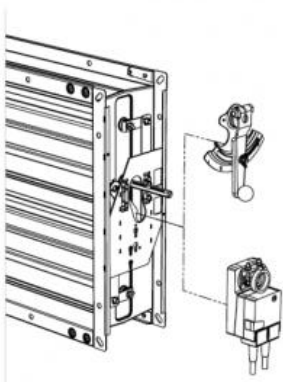
$L \leq 3000$  x  $H \leq 1500$

$L \leq 2000$  x  $H \leq 2000$

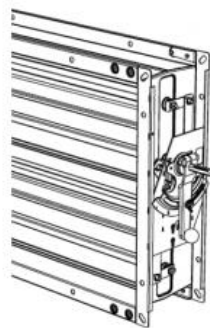
$L \leq 1500$  x  $H \leq 3000$

## Dimensional characteristics:

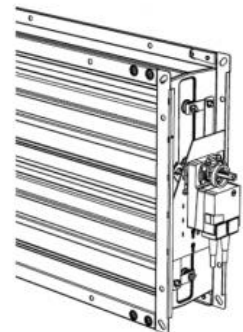
### Perno e piastra universale (standard)

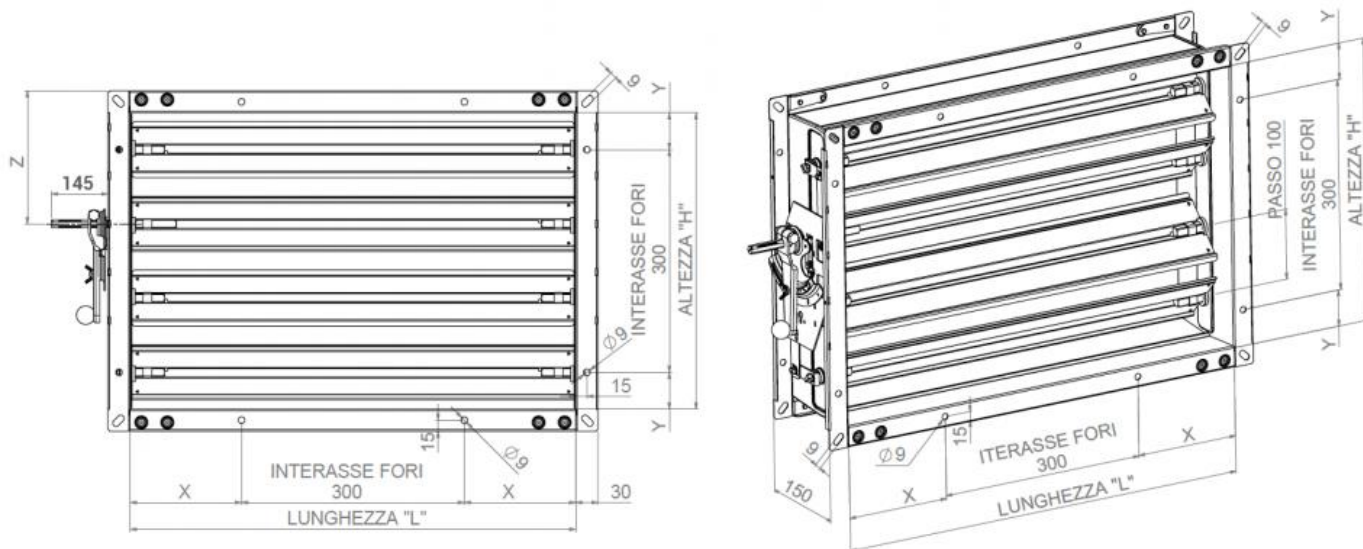


### Comando manuale



### Servomotore





L	x	L	x	L	x
mm	mm	mm	mm	mm	mm
-	-	1100	100	2100	150
200	-	1200	150	2200	200
300	-	1300	200	2300	100
400	200	1400	100	2400	150
500	100	1500	150	2500	200
600	150	1600	200	2600	100
700	200	1700	100	2700	150
800	100	1800	150	2800	200
900	150	1900	200	2900	100
1000	200	2000	100	3000	150

H	y	z	H	y	z	H	y	z
mm	mm	mm	mm	mm	mm	mm	mm	mm
-	-	-	1100	100	550	2100	150	1050
200	-	50	1200	150	550	2200	200	1050
300	-	150	1300	200	650	2300	100	1150
400	200	150	1400	100	650	2400	150	1150
500	100	250	1500	150	750	2500	200	1250
600	150	250	1600	200	750	2600	100	1250
700	200	350	1700	100	850	2700	150	1350
800	100	350	1800	150	850	2800	200	1350
900	150	450	1900	200	950	2900	100	1450
1000	200	450	2000	100	950	3000	150	1450

### Servomotors technical characteristics:

		Servomotors WITHOUT SPRING RETURN				
		CM	LM..A	NM..A	SM..A	GM..A
Torque		2 Nm	5 Nm	10 Nm	20 Nm	40 Nm
Universal clamp for pin size (mm):		6-12,7	6-20	8-26	10-20	14-26
For dampers up to:		0,4 m <sup>2</sup>	1 m <sup>2</sup>	2 m <sup>2</sup>	4 m <sup>2</sup>	8 m <sup>2</sup>
ON/OFF 3-Point	AC/DC 24 V	CM24-L	LM24A	NM24A	SM24A	GM24A
	AC/DC 24 V With auxiliary contact		LM24A-S	NM24A-S	SM24A-S	
	AC 230 V	CM230-L	LM230A	NM230A	SM230A	GM230A
MODULATING 0-10V command	AC 230 V With auxiliary contact		LM230A-S	NM230A-S	SM230A-S	
	AC/DC 24 V	CM24-SR-L	LM24A-SR	NM24A-SR	SM24A-SR	GM24A-SR
	AC/DC 24 V With auxiliary contact		LM230ASR	NM230ASR	SM230ASR	

		Servomotors WITH SPRING RETURN				
Torque		TF	LF	NF	SF	EF
Universal clamp for pin size (mm):		2,5 Nm	4 Nm	10 Nm	20 Nm	30 Nm
For dampers up to:		6-12,7	8-16	10-22	10-22	12-26,7
		0,5 m <sup>2</sup>	0,8 m <sup>2</sup>	2 m <sup>2</sup>	4 m <sup>2</sup>	6 m <sup>2</sup>
ON/OFF 3-Point	AC/DC 24 V	TF24	LF24	NF24A	SF24A	EF24A
	AC/DC 24 V With auxiliary contact	TF24-S	LF24-S	NF24A-S2	SF24A-S2	EF24A-S2
	AC 230 V	TF230	LF230	NFA	SFA	EF230A
	AC 230 V With auxiliary contact	TF230-S	LF230-S	NFA-S2	SFA-S2	EF230A-S2
MODULATING 0-10V command	AC/DC 24 V	TF24-SR	LF24-SR	NF24A-SR	SF24A-SR	EF24A-SR
	AC/DC 24 V With auxiliary contact			NF24A-SR-S2	SF24A-SR-S2	EF24A-SR-S2
	AC 230 V	TF230-SR				

**Price list (ETTC100P damper with pin):**

L: Length  
H: Height  
all dimensions are expressed in mm

H	L						
	200	300	400	500	600	700	800
	euro	euro	euro	euro	euro	euro	euro
200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
600	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
700	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
800	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
900	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1000	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1100	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v

H	L						
	900	1000	1100	1200	1300	1400	1500
	euro	euro	euro	euro	euro	euro	euro
200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
600	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
700	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
800	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
900	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1000	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1100	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v

**Price list (ETTC100C damper with pin and manual control):**

L: Length  
H: Height  
all dimensions are expressed in mm

H	L						
	200	300	400	500	600	700	800
	euro	euro	euro	euro	euro	euro	euro
200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
600	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
700	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
800	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
900	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1000	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1100	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v

H	L						
	900	1000	1100	1200	1300	1400	1500
	euro	euro	euro	euro	euro	euro	euro
200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
600	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
700	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
800	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
900	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1000	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1100	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1200	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1300	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1400	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v
1500	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v	a.r. v

### Servomotor price list:

The prices in the table refer to the servomotor installed on the damper.

Model	Euro	Model	Euro
CM24-L	242,87 v	TF24	372,92 v
		TF24-S	441,75 v
CM230-L	258,18 v	TF230	401,61 v
		TF230-S	470,45 v
CM24-SR-L	353,80 v	TF24-SR	504,87 v
		TF230-SR	558,45 v
Model	Euro	Model	Euro
LM24A	292,59 v	LF24	455,15 v
LM24A-S	332,78 v	LF24-S	523,98 v
LM230A	292,59 v	LF230	495,33 v
LM230A-S	332,78 v	LF230-S	562,27 v
LM24A-SR	393,94 v	LF24-SR	617,70 v
LM230ASR	468,55 v		
Model	Euro	Model	Euro
NM24A	355,71 v	NF24A	579,47 v
		NF24A-S2	657,89 v
NM24A-S	430,31 v	NFA	a.r. v
NM230A	369,10 v	NFA-S2	a.r. v
NM230A-S	441,75 v	NF24A-SR	692,31 v
NM24A-SR	512,54 v	NF24A-SR-S2	770,72 v
NM230ASR	590,96 v		
Model	Euro	Model	Euro
SM24A	411,15 v	SF24A	709,52 v
		SF24A-S2	786,03 v
SM24A-S	512,54 v	SFA	816,63 v
SM230A	422,64 v	SFA-S2	893,08 v
SM230A-S	523,98 v	SF24A-SR	820,44 v
SM24A-SR	579,47 v	SF24A-SR-S2	877,78 v
SM230ASR	655,98 v		
Model	Euro	Model	Euro
GM24A	728,63 v	EF24A	1447,72 v
		EF230A	1661,90 v
GM230A	740,09 v	EF230A-S2	1770,92 v
GM24A-SR	872,07 v	EF24A-SR	1619,81 v
		EF24A-SR-S2	1719,30 v

### Accessories:

Model	Description	euro
S2A	Auxiliary contact S2A for rotary actuators WITHOUT SPRING RETURN - 2 contacts (SPDT) - Adjustable switching points	142,80 v
	Auxiliary contact S2A-F for rotary actuators WITH SPRING RETURN - 2 contacts (SPDT) - Adjustable switching points	
S2A-F	- Adapter	211,10 v
SGA24	Potentiometer suitable for use with LM..A-SR, NM..A-SR, SM..A-SR and GM..A-SR series modulating actuators (wall mounting with box)	a.r.
SGF24	Potentiometer suitable for use with LM..A-SR, NM..A-SR, SM..A-SR and GM..A-SR series modulating actuators (wall mounting without box)	a.r.