



indoor air quality and energy saving

## TECHNICAL DATA



UNIT	ENERGETIC CLASS
MICRO-FLAT AC	B
MICRO-FLAT EC	A



# MICRO-FLAT



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS



## MICRO-FLAT

High efficiency heat recovery ventilation unit with double flow for residential buildings. There are two high performance versions: MICRO-FLAT AC and MICRO-FLAT EC.

## PERFORMANCES

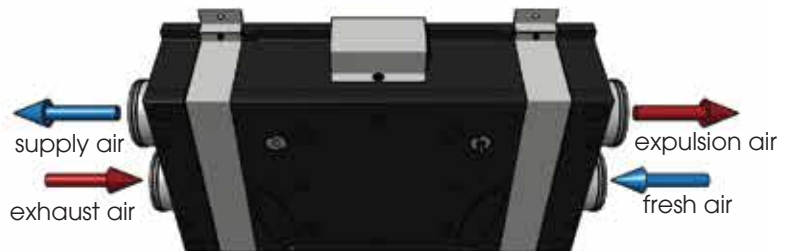
It is equipped with a PP counterflow heat exchanger. Backward blade fans (single speed for AC version and electronically controlled for EC version) allow a maximum flow of 77 m<sup>3</sup> / h at 50 Pa (MICRO-FLAT AC) with a consumption of only 40 W and 115 m<sup>3</sup> / h at 100 Pa (MICRO-FLAT EC) with an electricity consumption of only 45 W.

## STRUCTURE

The MICRO-FLAT is made with a self-supporting structure in PPE, material that ensures a high degree of thermal insulation towards the outside and between the air flows. Access to the filters (ePM10 50% (G4)) is particularly easy thanks to two special openings located on the inspection panel.

The MICRO-FLAT is designed to be installed on the ceiling or on the floor inside buildings with an ambient temperature between 0 ° C and 45 ° C.

## CONFIGURATION

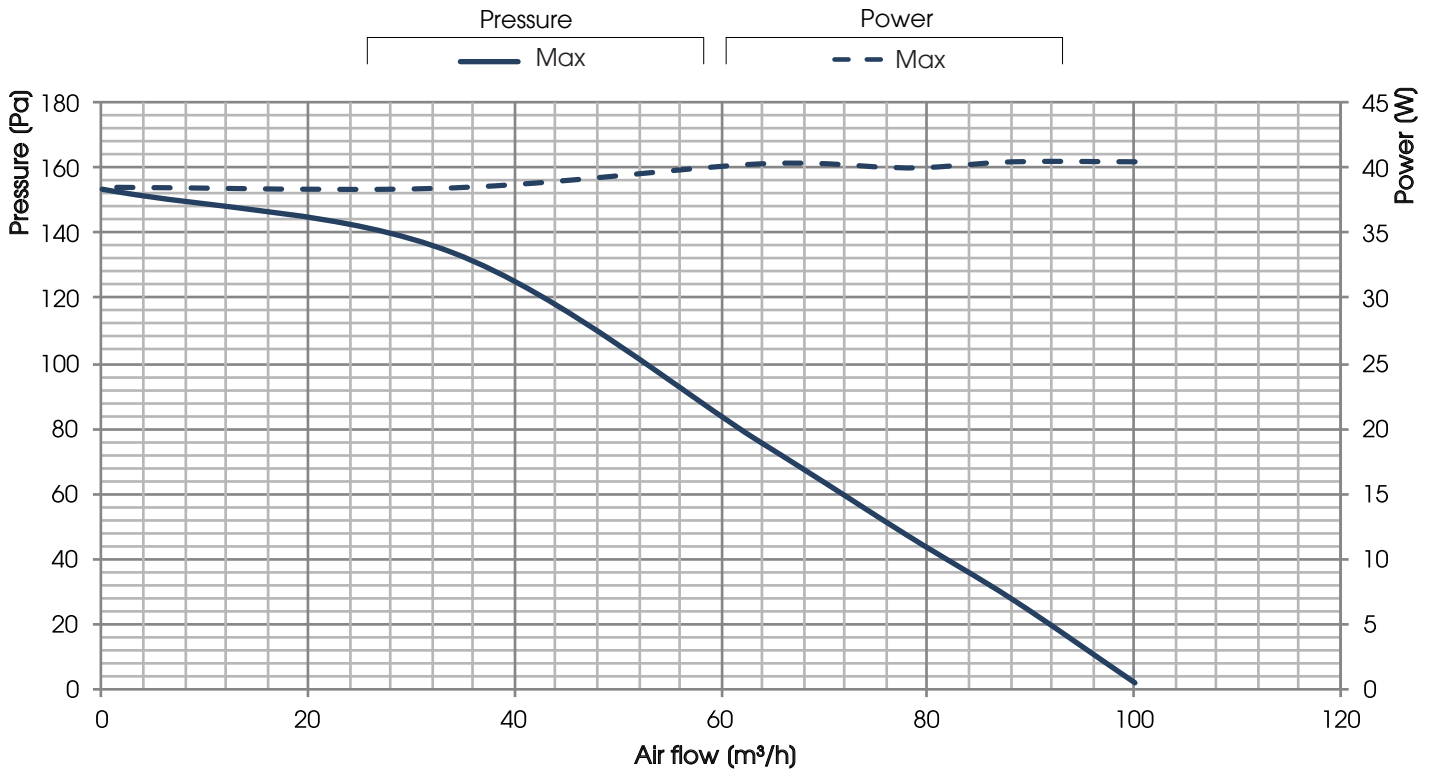




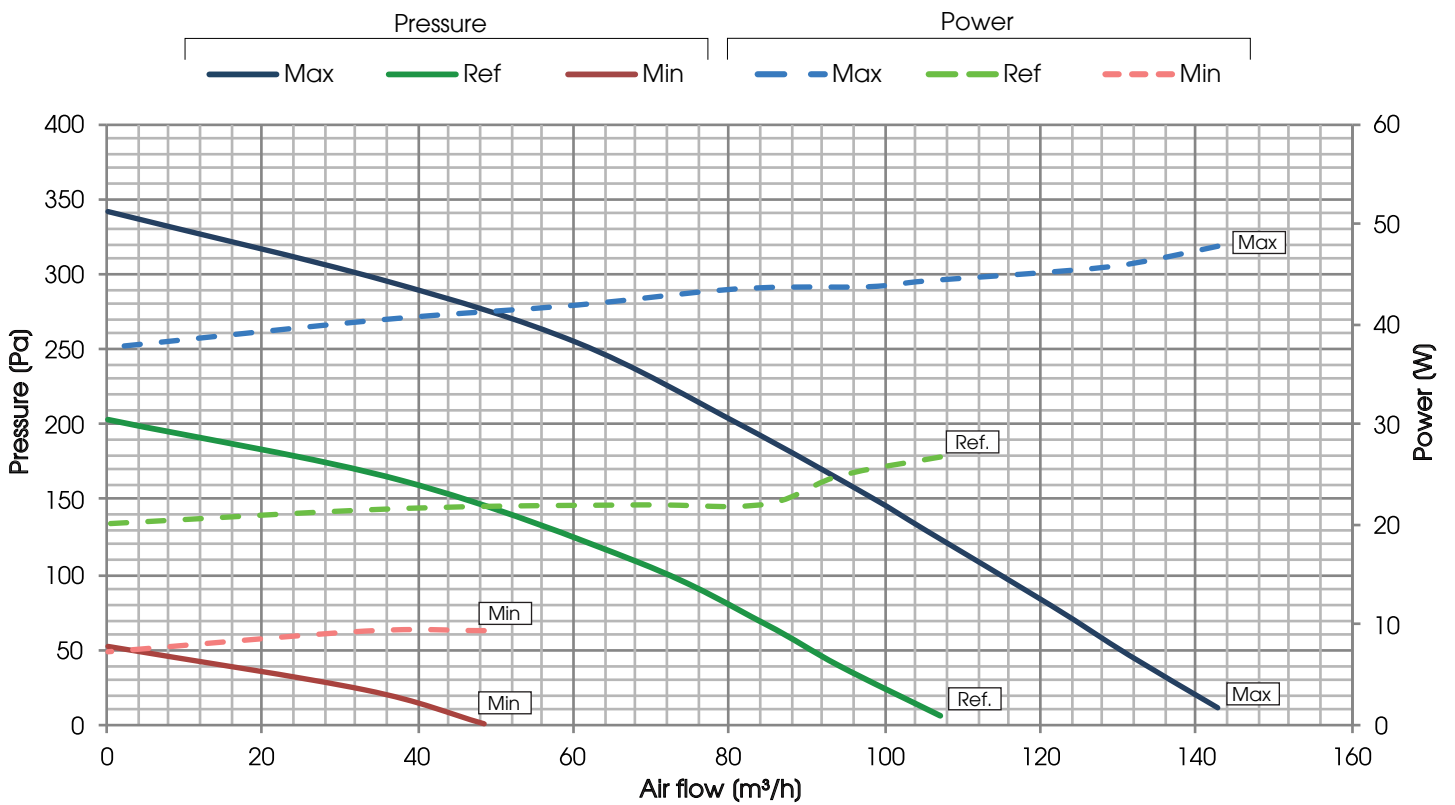
### PERFORMANCES (UNI EN 13141-7)

The unit must be ducted properly: UTEK authorizes the use only according to its performance diagram shown into this catalogue  
The declared performances are with CLEAN filters, and guaranteed ONLY with the original filters UTEK low pressure drop.

#### MICRO-FLAT AC



#### MICRO-FLAT EC



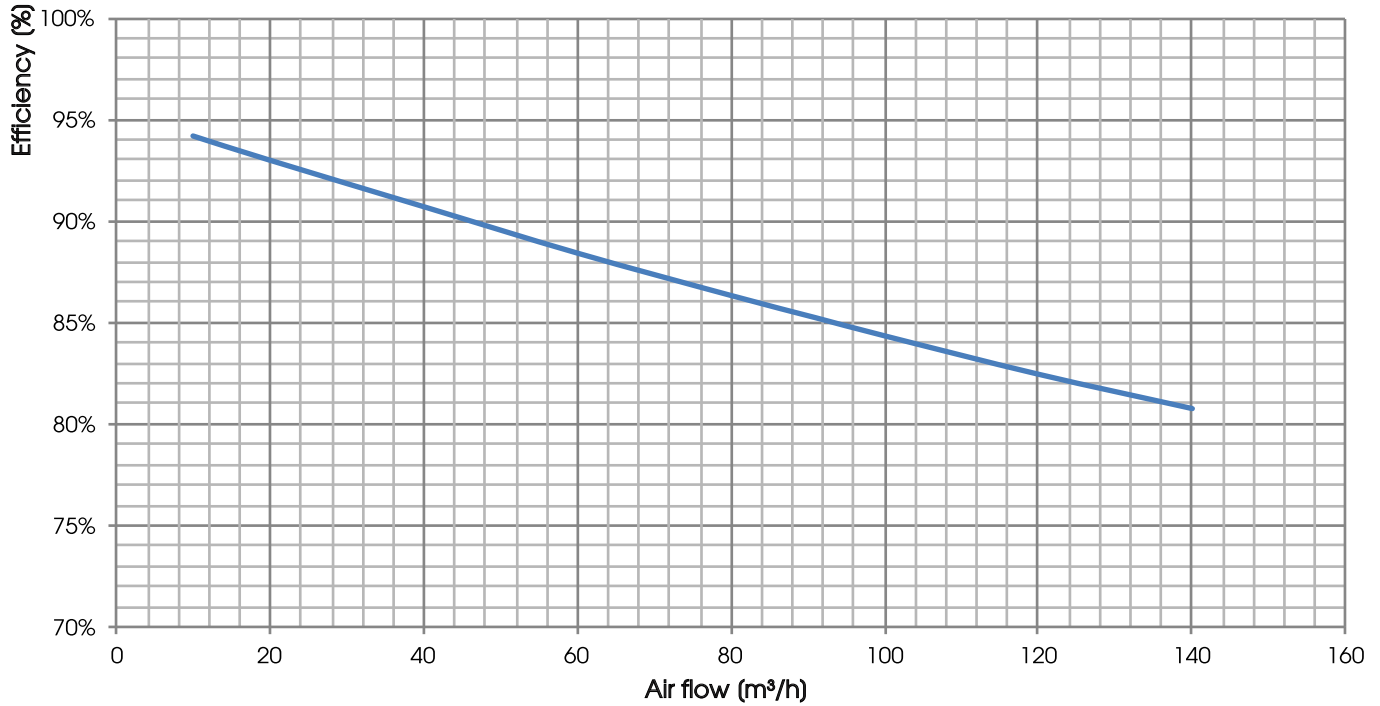


## HEAT RECOVERY PERFORMANCE (sensible efficiency)

Values referred to the following conditions (UNI EN 13141-7): T<sub>bs</sub> external air 7°C; U.R. external 72%; T<sub>bs</sub> environment 20°C; U.R. environment 28%

### MICRO-FLAT

— Efficiency



### TEST LEAKAGE MICRO-FLAT AC according UNI EN 13141-7

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pression 250 Pa	A3
OUTDOOR	Negative pression 250 Pa	A3
INDOOR	Pressure difference 100 Pa	A3

### TEST LEAKAGE MICRO-FLAT EC according UNI EN 13141-7

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pression 250 Pa	A2
OUTDOOR	Negative pression 250 Pa	A2
INDOOR	Pressure difference 100 Pa	A3

### NOISE LEVEL

L<sub>w</sub> Sound power level taken in accordance to UNI EN ISO 3741 CLASS 1

Unit MICRO-FLAT AC	NOISE FROM THE CASE (dB)								L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
100%	39,3	45,3	42,5	48,0	41,7	34,2	22,7	50,1	

Unit MICRO-FLAT AC	NOISE IN THE DUCTS (dB)								L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
100%	39,9	49,0	45,0	53,5	45,3	39,6	25,7	55,0	

Unit MICRO-FLAT EC	NOISE FROM THE CASE (dB)								L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
100%	44,7	46,9	53,1	53,3	47,4	43,4	31,2	56,0	
REF	41,2	44,9	45,9	47,9	42,9	37,9	25,2	50,6	

Unit MICRO-FLAT EC	NOISE IN THE DUCTS (dB)								L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
100%	46,7	51,9	58,2	57,2	52,7	49,1	36,7	60,7	
REF	42,6	52,2	50,7	50,8	47,5	42,6	28,8	54,7	

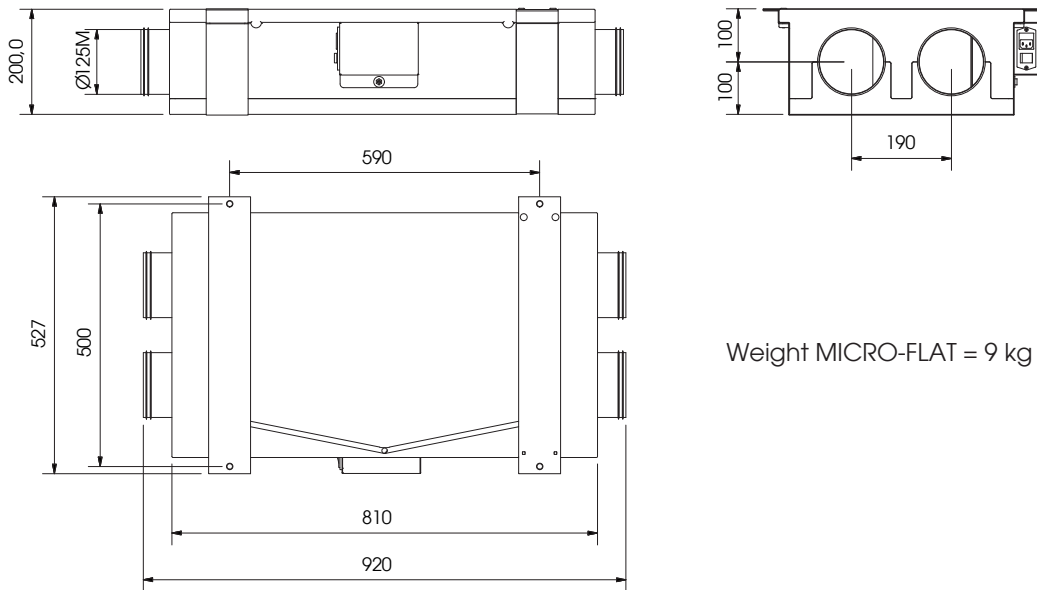


## ELECTRICAL DATA

UNIT	FAN				UNIT FLAT/ENT	
	Power (W)	Supply	Current max (A)	Insulation class	Supply	Current max (A)
MICRO-FLAT AC	2 X 26	230 V, 50/60 Hz 1F	2 X 0,12	IP 42 class B	230 V, 50 Hz 1F	0,3
MICRO-FLAT EC	2 X 27	230 V, 50/60 Hz 1F	2 X 0,27	IP 54 class B	230 V, 50 Hz 1F	0,6

(\*) Fan data, it's referred to the global absorbed power graph of the machine in the working point

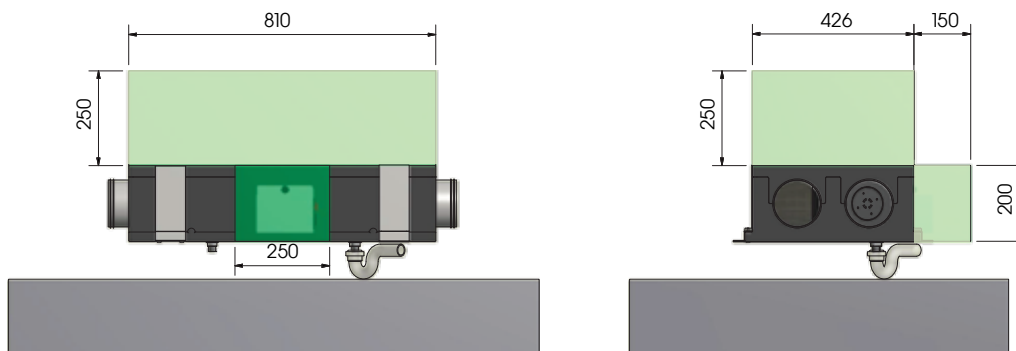
## MICRO-FLAT DIMENSIONS (mm) WEIGHT (kg)



## MICRO-FLAT INSTALLATION

### FLOOR INSTALLATION

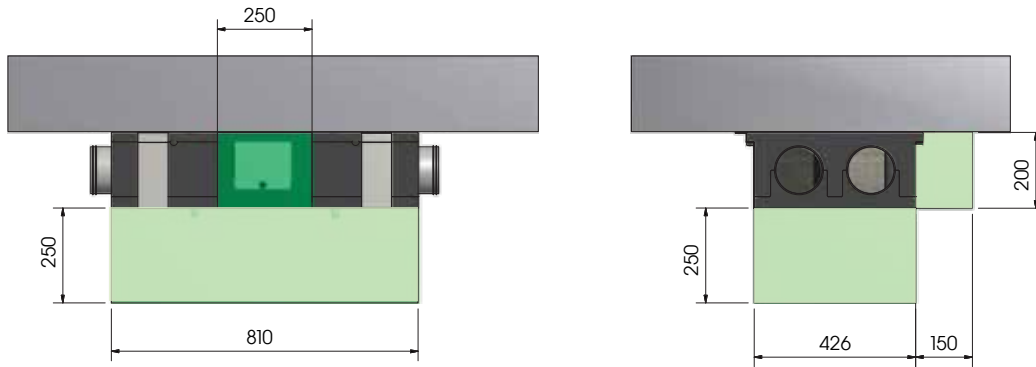
■ Minimum required space for maintenance (mm)



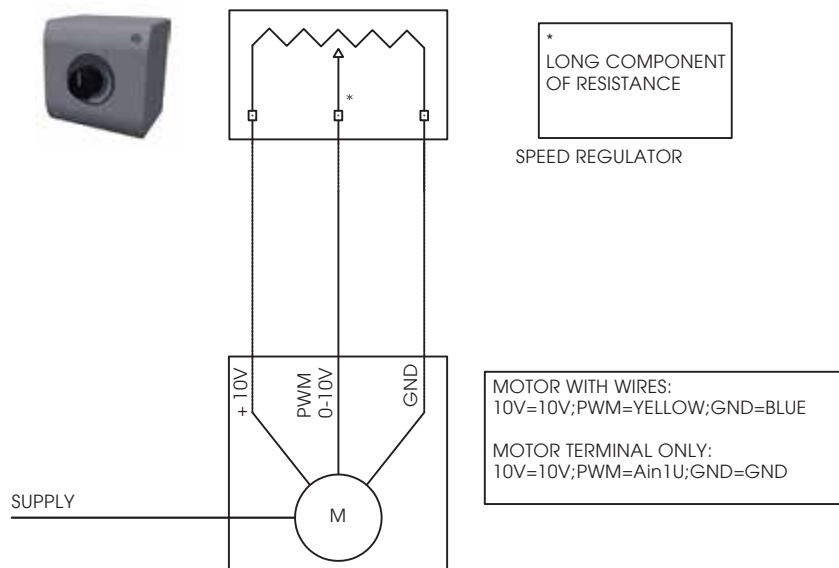


## CEILING INSTALLATION

■ Minimum required space for maintenance (mm)



## VARIABLE RESISTANCE SPEED CVR REGULATOR (only for EC version)





A	Manufacturer's name C.L.A. S.r.l			
B	Manufacturer's model identifier	MICRO-FLAT AC	MICRO-FLAT EC	
C	Specific energy consumption (SEC) (kWh/m <sup>2</sup> .a)	COLD	- 65,3	-72,6
		TEMPERATE	- 27,9	-35,6
		WARM	- 3,8	-11,8
	SEC class	B	A	
D	Declared typology	UVR - UVB	UVR - UVB	
E	Type of drive installed	on / off and single speed	variable speed	
F	Type of heat recovery system	Recovery	Recovery	
G	Thermal efficiency of heat recovery (%)	0,86	0,85	
H	Maximum flow rate (m <sup>3</sup> /s)	0,014	0,032	
I	Electrical power input at maximum flow rate (W)	40	45	
I	Sound power level (Lwa)(dB)	50	51	
K	Reference flow rate (m <sup>3</sup> /s)	0,021	0,025	
L	Reference pressure difference (Pa)	50	50	
M	SPI (W/m <sup>3</sup> /h)	0,524	0,264	
N	Control factor CLTR			
	Control typology	Manual control (without DCV)	Manual control (without DCV)	
O	Declared maximum internal / external leakage rates (%)	10,4 / 7,8	7,0 / 5,2	
P	Mixing rate of non-ducted bidirectional ventilation units (%)	-	-	
Q	Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	Filter warning is signaled on the display of the control system: the flashing writing "DirtyFilters" will appear. "To preserve the energy efficiency of the NRVU, it's recommended to replace the filters when signaled." Positioned near the filters inspection.		
R	For unidirectional ventilation systems, instructions to install regulated supply/exhaust grilles in the façade for natural air supply/extraction	-	-	
S	Internet address for pre-/dis-assembly instructions	www.utek-air.it		
T	For non-ducted units only: the airflow sensitivity to pressure variations at + 20 Pa and - 20 Pa	-	-	
U	For non-ducted units only: the indoor/outdoor air tightness	-	-	
V	The annual electricity consumption (AEC) (kWh/a)	700	380	
W	The annual heating saved (AHS) for each type of climate (kWh/a)	2020 (WARM)	2000 (WARM)	
		8750 (COLD)	8660 (COLD)	
		4470 (TEMPERATE)	4430 (TEMPERATE)	

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

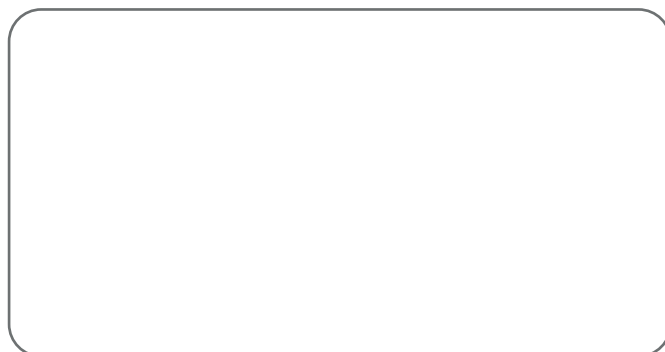
Dear Customer

Thanks for your attention to the product UTEK , designed and manufactured to ensure the real values to the User: Quality, Safety and Savings on working.



Made in Italy

**COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
ISO 9001**



the Dealer  
MICRO-FLAT\_2020\_0\_EN



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