

# DESCALER®

## DESCALER PRO SERIES - TRIANGULAR

**New series** of DESCALER PS with **Triangular Wave Technology (TWT)** uses a state-of-the-art integrated microprocessor circuit based on leadless SMD components. The unit generates **complex frequency** as well as an **amplitude-modulated triangular signal** that efficiently prevent formation of scale, especially, for bigger diameters of piping.

**DESCALER PS** is designed for protection of hot water and heating systems against formation of undesired hard

incrustations, and significantly reduces the time consumption and costs during their maintenance and prolongs their life.

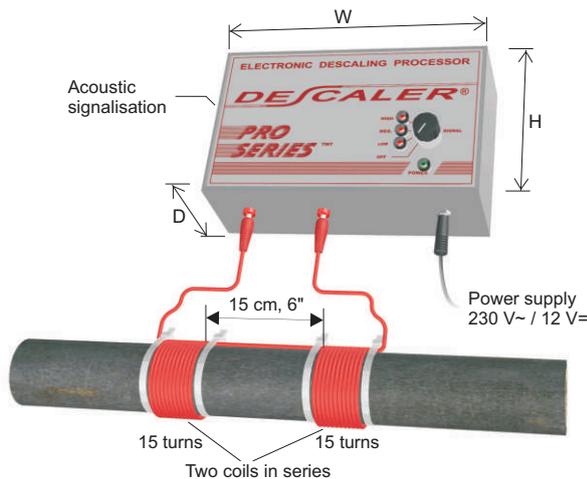
**APPLICATIONS** - boiler plants, exchanger stations, steam boilers (water pre-treatment), preparation of hot water for blocks of flats, circulation of hot water, larger swimming pools, technological equipment, compressor cooling, oil coolers, etc.)

### TECHNICAL DESCRIPTION:

**TWT signal generator** in a self-extinguishing plastic case. On the front panel there are sockets for induction coils and power supply. On the left there is a slot with an acoustic converter producing a beep when the coil circuit is broken or there is malfunction of the unit. The top panel includes a 4-position switch for intensity of output signal (positions HIGH, MED., LOW for optimal impact of the unit and position OFF to turn the signal off) and red LED lights indicate the intensity of the signal (a relevant LED is permanently on). In case the coil circuit is disconnected or there is malfunction, a relevant LED flashes. A green LED indicates power supply.

**Wire for winding coils** on the pipe with banana connectors, plastic clamping bands for fixing coils.

**Power supply** 230 V~ / 12 V=, 500 - 1000 mA (according to the type of unit).



### OPTIONAL ACCESSORIES:

**Remote signalisation** - the output of the relay is a 6.3 mm jack socket on the right side of the unit. It allows monitoring of the correct operation of the unit from a distance. The description of the connection of relay contacts is shown on the plate. Loading capacity of relay contacts:

$I_{max} = 1 A$ ,  $U_{max} = 120 VAC / 60V DC$ , max. 25 W

### COMPARISON OF TRIANGULAR AND RECTANGULAR SIGNAL:

The induction of electric field in the pipe necessary for agitation of water molecules,  $Ca^{2+}$  and  $HCO^-$  ions can only occur with the change of the electric current in the induction coil of the unit. Classic generators of rectangular signals change the current only for a very short period of the time, whereas the generators of triangular signals change the current 100% of the time. The amplitude modulation (change of the signal intensity during next times) improves the efficiency of the unit even more.

**Rectangular Wave Generator** (Descaler HE) generates rectangular (square) signal with constant amplitude. Frequency is continuously changing (generator sweep the signal) from 1 kHz up to 10 kHz (frequency modulation), ten times per second.

**Triangular Wave Generator** (Descaler PS Triangular) generates complex triangular frequency and amplitude modulated signal with variable amplitude (amplitude modulation). Frequency is continuously changing (generator sweep the signal) from 2 kHz up to 7 kHz (frequency modulation) three times per second.

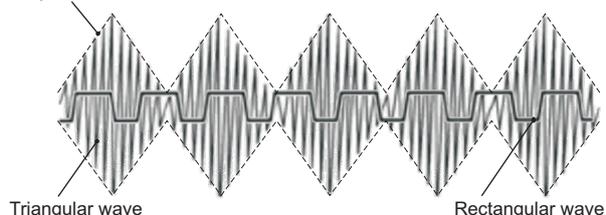
Descaler PS50, PS100



Descaler PS200, PS300



Amplitude modulation



Type	Internal diameter of piping [inch]	Range of flowrates [m <sup>3</sup> /hour]	Dimensions [Width x Height x Depth mm]
DESCALER PS 50	2"	0,2 ÷ 21	215 x 135 x 95
DESCALER PS 100	4"	0,8 ÷ 85	215 x 135 x 95
DESCALER PS 200	8"	2,3 ÷ 250	215 x 135 x 95
DESCALER PS 300	12"	4,0 ÷ 400	215 x 135 x 95