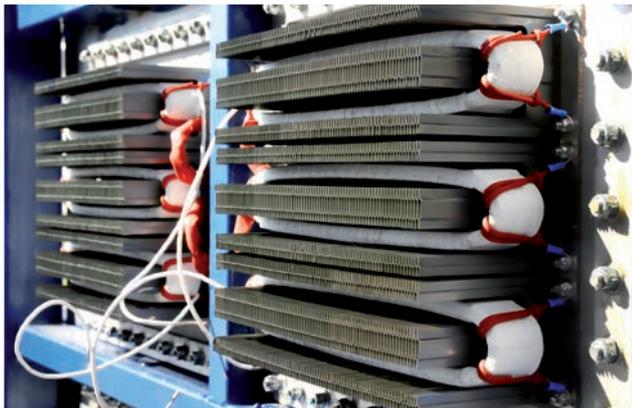


# ULTRASOUNDS

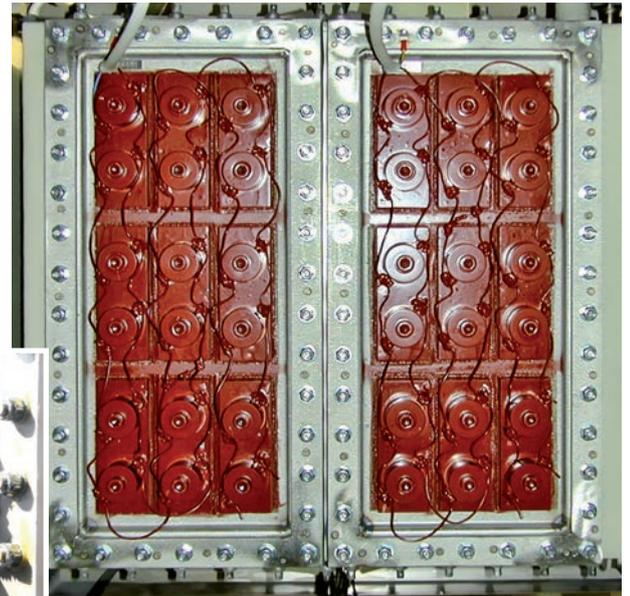
A complete range of ultrasounds



Piezo25



Magneto

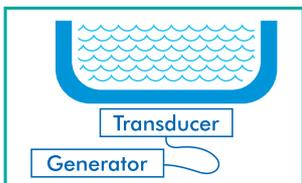


Multi

**Magnetostrictive, piezoelectric and multiple frequency ultrasounds** to meet every requirement

## Working principle:

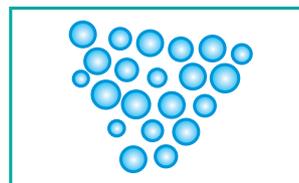
The system consists of a stainless steel tank equipped with an ultrasonic transducer that is powered by a generator. The parts to be treated are placed in a basket that is immersed in the cleaning solution contained in the tank.



① Under the action of the signal emitted by the generator, the transducer creates a high frequency wave that is propagated into the liquid.



② This wave then creates alternate pressure and depression phases in the liquid.



③ During the depression phase, tiny vacuum bubbles appear in the liquid: this phenomenon is called cavitation.



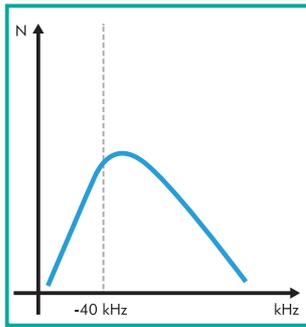
④ During the pressure phases, the bubbles implode when they come into contact with the immersed parts and release the energy that created them. This mechanical energy also improves the efficiency of the chemical action of the cleaning product used in the tank.

# Ultrasounds A complete range of ultrasounds

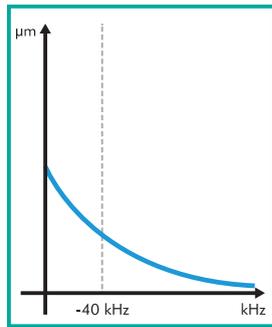
The mechanical effect of ultrasonic cleaning depends on a number of factors such as: shape and weight of the parts, type of contaminants, the process being used, water quality.

In order to guarantee outstanding results under any conditions, FISA has designed different types of ultrasounds. The ultrasounds are generated by two different types of transducers:

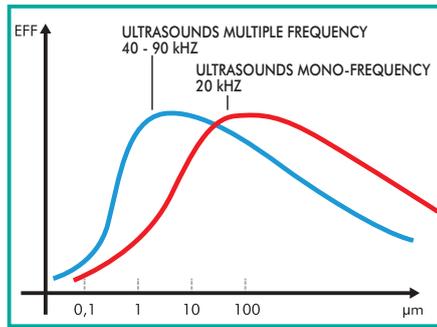
- Magnetostrictive transducers: consist of a set of nickel strips set in a honeycomb structure that is designed to form a membrane. The membrane vibrates to create the ultrasonic wave.
- Piezoelectrical transducers: consist of electrostrictive blocks with their two ceramics surrounded by two metallic masses with high and low density that generate the ultrasonic wave. Using this system, we can produce single or multiple frequency systems.



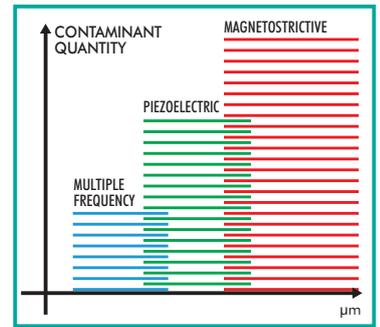
Quantity of bubbles generated depending on frequency.



Size of bubbles depending on frequency.



Efficiency of different types of ultrasounds according to the size of contaminants.



Range of use of ultrasounds.

## Technical characteristics of our generators

Type	Model	Frequency	Power	Standard	Optional	Transducers
 Magnetostrictive	USM 14	20 kHz	1400 W	LPR - RDC	SD	1 x 1400 W
	USM 14Q	20 kHz	1400 W	LPR - RDC	SD	2 x 700 W ou 1 x 1400 W
	USM 28	20 kHz	2800 W	LPR-RDC - SD	-	2 x 1400 W
 Piezoelectrical	US 400 P25	25 kHz	400 W	LPR-RDC - SD	-	max. 8 x 50 W
	US 800 P25	25 kHz	800 W	LPR - RDC	SD	max. 16 x 50 W
	US 800 P22	22 kHz	800 W	LPR - RDC	SD	max. 16 x 50 W
	US 1500 P25	25 kHz	1500 W	LPR - RDC	SD	max. 30 x 50 W
	US 1500 P22	22 kHz	1500 W	LPR - RDC	SD	max. 30 x 50 W
 Multiple frequency piezoelectrical	SRX 400 P40	40 kHz - 90 kHz	400 W	LPR - RDC	-	5 x 80 W
	SRX 800 P40	40 kHz - 90 kHz	800 W	LPR - RDC	-	10 x 80 W
	ASRP 306	40 kHz - 90 kHz	320 W	RC (1600 W)	-	4 x 80 W
	SRX 640 P40	40 kHz - 90 kHz	640 W	RC - SD (3000 W)	-	8 x 80 W

SD : Self Diagnostic - LPR : Local Power Regulation - RC : Remote Control ON-OFF - RDC : Remote Control Duty-Cycle

## Our standard ultrasonic flanges

Other dimensions available on request

Type	Dimensions
FB 310	230 x 310 mm
FB 350	270 x 350 mm
FB430	350 x 430 mm
FB 550	270 x 550 mm
FB 590	430 x 590 mm
FB 910	270 x 910 mm



## FISA Technical support

We always invite our customers to come and see a demonstration of the efficiency of our system on an industrial-sized installation in our labs. FISA customer support starts from the design stage and continues for the entire lifetime of the machine.